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EXPANDING DEVELOPING COUNTRY SMALL BUSINESSES' USE OF ONLINE PLATFORMS FOR TRADE

July 2018

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I. EXECUTIVE SUMMARY

Ecommerce has opened tremendous new opportunities for small and mid-size enterprises (SMEs) to export and grow. Using global ecommerce and payment platforms such as eBay, Etsy, PayPal, Alibaba, and Mercado Libre to connect to tens of millions of online buyers, small businesses are highly likely to export, export to multiple markets, and derive most of their revenue from exports – as opposed to traditional brick-and-mortar businesses of which only a small minority export.

Developing country governments are increasingly cognizant of the opportunity to use ecommerce platforms to help SMEs export and import goods and services, and to fuel inclusive growth in their economies. Many governments are also gaining an understanding of the challenges SMEs in their countries face to access and use online platforms for trade. And governments tend to be aware of the types of policies that can help SMEs use platforms to engage in trade, such as digital regulations that promote innovation and protect consumers, trade facilitation practices that accelerate customs clearance, and export promotion practices that build SMEs' capacity for succeeding at ecommerce. However, developing country governments still tend to lack:

- An understanding of the state of platform-enabled trade and SMEs' use of platforms for trade in their economies, and the potential for different policies to increase this usage;

- Knowledge about the types of regulations, policies and practices that help SMEs use platforms for trade, such as various digital regulations essential for the online economy to work, online payment laws and practices that fuel cross-border payments, postal services that accelerate ecommerce deliveries, and ecommerce export promotion programs and financing programs that support SMEs in becoming online sellers;

- Understanding of the types of policies and practices *other* countries are pursuing to fuel SMEs' use of ecommerce, how exactly those countries have designed their regulations and policies, and what replicable, impactful policy innovations and best practices may be emerging around the world; and

- Ability to quickly compare their country to others in the adoption of policies and practices key to platform-enabled trade, and a means to track their country's progress vis-à-vis peer economies over time.

The purpose of this report is to help mend these knowledge gaps. This report is produced in a public-private partnership "Alliance for eTrade Development" between USAID and four companies (PayPal, Google, King & Spalding, and eBay), and aimed to offer developing country policymakers:

- **New, proprietary data on the growth of platform-enabled trade** in goods and services and SMEs' use of platforms to trade in various economies around the world;

- **Compilation of 60 "best practice" regulations, policies and practices that help SMEs use online platforms for trade** in six main policy areas – digital regulations, payment regulations, digital infrastructures, SME finance, SME export promotion, and ecommerce logistics and trade facilitation;

- **Pioneering mapping of the adoption of these 60 policies and practices in 40 countries** in Africa, Asia, Europe, Latin America, and North America;

- **New composite policy index, Policy Index for Platform-Enabled Trade,** based on the qualitative mapping and enables countries to track and measure their adoption of these 60 policies vis-à-vis the adoption by their peers;

- **Case studies and several brief summaries of innovative policies and practices** in advanced and developing countries to fuel digitization and trade on platforms;

- **Econometric analysis of the impact of different policies** on the growth of platform-enabled trade and the number of platform sellers around the world; and

- **Policy roadmap for catalyzing SMEs' use of platforms for trade,** tailored to countries' unique starting points and circumstances.

The findings and recommendations of this study are as follows:

- **Platforms are an increasingly significant enabler of SME exports in goods and services, particularly in developing countries.** Analysis of transactions on global platforms indicates that platforms are an excellent means for developing countries to spur SME exports: developing country sellers use platforms almost exclusively to export. In most developing economies, platform-enabled exports are growing much faster than overall trade and economy. Platform-enabled trade also appears to be a core business for developing country sellers that are using platforms: their annual sales volumes on online platforms are as sizable as those of advanced country merchants. Yet developing country SMEs' use of platforms is still very low – less than a tenth of SMEs' use of platforms in the UK, for example. This suggests that better regulations, policies, and programs are needed to bolster developing country SMEs' access to and use of platforms for trade.

- **Most countries have adopted what might be called "low-hanging fruit" policies conducive to platform-enabled trade, but many impactful policies have yet to be widely adopted – and there is backsliding in some areas.** Most countries have already done the basics, such as made customs information available online, adopted a digital signatures law, and provided credit guarantees for bank loans to SMEs. However, yet to be adopted at scale are such essential policies as safe harbors that provide immunity for internet intermediaries from user-generated content and thus enable platforms to operate, online dispute resolution systems that help build consumers' trust in transactions on platforms, export promotion practices that enable SMEs to bolster their digital readiness and learn to use major global platforms to trade, and financing programs that fuel SMEs' digital transformation and adoption of ecommerce capabilities. Some countries are turning away from good practices in such areas as *de minimis* and cross-border data transfer rules.

- **There is a significant amount of positive innovation and experimentation with policies conducive to platform-enabled trade around the world**. The study reveals numerous exciting policy innovations in both advanced and developing countries that can significantly enhance SMEs' use of online platforms for trade. For example, Singapore and Canada have developed extensive new postal services to promote ecommerce in their economies and cross-border trade; many Latin American economies such as Peru, Mexico, Brazil, and Costa Rica, along with Thailand and Malaysia, have built creative online programs, public-private partnerships, and digital transformation initiatives to help SMEs use platforms to export; and Korea, UK, and several East African economies have made significant inroads into adopting blockchain in customs in order to facilitate identification of high-risk shipments and clearance of low-risk ones.

India, Peru, and Tanzania have made significant progress on promoting the use and interoperability of online and mobile payments, while UK has developed high-impact SME finance policies, such as open banking practices that help SMEs secure credit and FinTech regulatory sandboxes that enable financial innovation, including in the area of SME finance. In the area of digital regulations, Brazil has created a renowned safe harbor for internet intermediaries, while Colombia and Costa Rica have recently revised their data transfer rules to accommodate the data needs of globalizing companies, while also protecting their citizens' data rights. Chile, Malaysia, and Mexico stand out for their promotion of woman-owned companies and women exporters.

- **The policy index for platform-enabled trade developed in this report is strongly correlated with countries' development levels, but there are also countries that outperform their peers at the same level of development.** Overall, advanced countries and selected East Asian and Latin American economies have adopted about 60-75 percent of the good policies and practices mapped here, while less developed countries in Africa, South Asia, Southeast Asia, and Central America have adopted only 20-35 percent. In the top quartile of countries with highest policy coverage are five advanced economies (UK, Canada, Korea, Japan, Singapore), three Southeast Asian nations (Indonesia, Thailand, and Malaysia), as well as China and Mexico. Thailand, Malaysia, Mexico, China, and Rwanda outperform their peers at the same level of development in the adoption of the mapped policies.

- **Policies that fuel broadband connectivity, quality of ICT skills and services, cross-border logistics, and ease for SMEs to comply with regulations boost the number of platform sellers**. The volume of export sales made on platforms from a country grows in lockstep with the number of platform sellers in a country, which suggests that the key for developing countries to grow their platform-enabled trade is to help birth new sellers. Econometric results suggest that the number of platform sellers is significantly shaped by broadband connectivity, ICT skills and services, and quality of international logistics. Early statistical work suggests that the policy index for platform-enabled trade developed here could be a good predictor of the volumes of platform-enabled trade.

Value-Added and Next Steps

There are analogous efforts to ours to identify a composite policy index, or a mix of policies, that are needed for successful economic outcomes to come about. For example, the Organization for Economic Cooperation and Development (OECD) has an SME Policy Index that tracks dozens of policies found to be conducive to SME development, while the World Trade Organization (WTO) and United Nations (UN) track countries' implementation of a bundle of trade facilitation and paperless trade policies. This report is the first effort to date to understand the policy mix that optimizes SME use of platforms for trade – and use of ecommerce in general. It offers new value in four ways:

- **Fuel cross-country learning of policies and regulations conducive to platform-enabled trade**. The qualitative mapping developed in this report enables any policymaker or business leader to access information on what their own country and 39 other countries are doing in the policy areas conducive to platform-enabled trade. For example, the policymaker can very quickly gain an understanding how other countries have adopted and designed their e-payments laws, copyright regulations, ecommerce-related postal services, or ecommerce export promotion programs; deepen his or her analysis by referring to case studies developed in this report; and then refer to those policies and practices when advocating policy changes in his or her country.

By mapping and tracking policies, this work also readily complements the many indices that track economic policy *outcomes*, such as World Bank's Doing Business and forthcoming doing digital business, and the 2017 USAID-sponsored survey developed by Nextrade Group on SMEs' views about the enabling environment for ecommerce. These analyses give a sense of outcomes and pending challenges in various policy areas pertinent to ecommerce, but they do not provide guidance on the optimal policies, regulations, and programs policymakers are to pursue to mend those challenges. This report fills that gap.

- **Enable developing countries to rigorously compare themselves to their peers in the adoption of policies and practices conducive to platform-enabled trade, and see how "far" they are from global best practice.** This work provides a new tool to track the adoption and implementation of policies key to platform-enabled trade, and a succinct means to perform cross-country comparisons in the adoption of such policies. As such, this tool empowers policymakers in developing countries to quickly diagnose areas where their countries have work to do and how their countries fare over time vis-à-vis peer economies in the adoption of policies and practices conducive to SME ecommerce.

- **Through empirical analysis and reviews of academic literature, help developing countries to understand the key policy drivers of platform-enabled trade.** Ours is a pioneering effort to provide empirical grounds to policies that, once in place, can propel SMEs' use of platforms for trade. Though our proprietary data on platform-enabled trade are limited by years and countries, they do open an opportunity to explore the interaction of policies and platform-enabled trade flows. This helps policymakers understand the policy levers they ought to pull to stimulate platform-enabled trade in their economies.

- **Provide customized policy roadmaps for developing countries to fuel SMEs' use of platforms for trade**. By mapping policies and practices various countries have already in place or have yet to adopt, this study enables policy roadmaps customized to each country.

The approach and results can next be leveraged in various ways, such as:

- Expand the set of countries analyzed, to enable rigorous cross-country comparisons and identification of a wider range of policy innovations;

- Create a real-time online database along the lines of the UN's database for paperless trade policies to systematically track countries' progress in adopting and implementing policies essential to platform-enabled trade and ecommerce;

- Use this framework to arrive at regional and global agreements on common policies and practices for stimulating SME use of platforms for trade, and to develop capacity-building projects for countries to catch up with global good practice; and

- Use the policy data collected here to create a digital integration index to understand the level of compatibility between different countries' digital regulations, an important enabler of cross-border trade on platforms.

This work is hoped to generate regulatory reforms, trade facilitation efforts, SME export promotion programs, and SME financing facilities that materially improve the odds for developing country SMEs to use online platforms for trade. This project is ultimately hoped to fuel the growth of platform-enabled trade and SMEs engaged in platform-enabled trade in developing countries and across all segments, such as women-led and rural enterprises.

II. INTRODUCTION

Ecommerce has opened tremendous new opportunities for small and mid-size enterprises (SMEs) to export and grow. Using global ecommerce and payment platforms such as eBay, Etsy, PayPal, Alibaba, and Mercado Libre to connect to tens of millions of online buyers, online sellers are highly likely to export, export to multiple markets, and derive most of their revenue from exports – as opposed to traditional brick-and-mortar businesses of which only a small minority export, and typically only to one or two markets.

Developing country governments are increasingly cognizant of the opportunity to use ecommerce platforms to help SMEs export and import goods and services, and to fuel inclusive growth in their economies. Many governments are also gaining an understanding of the challenges SMEs in their countries face to access and use online platforms for trade. And governments tend to be aware of the types of policies that can help SMEs use platforms to engage in trade, such as digital regulations that promote innovation and protect consumers, trade facilitation practices that accelerate customs clearance, and export promotion practices that build SMEs' capacity for doing ecommerce. However, developing country governments still tend to lack:

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- Ability to quickly compare their country to others in the adoption of policies and practices key to platform-enabled trade, and a means to track their country's progress vis-à-vis peer economies over time.

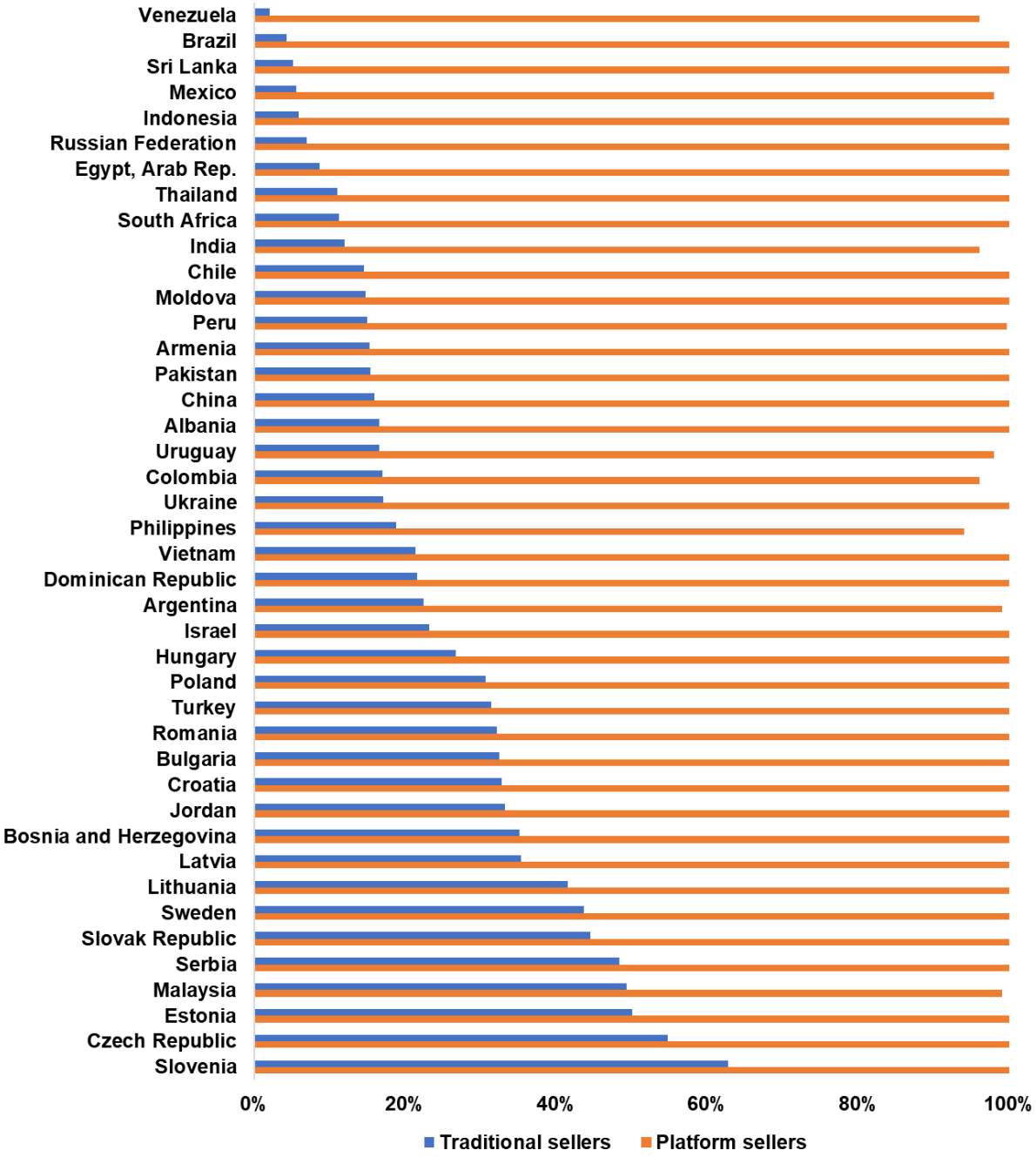
The purpose of this report is to start mending these knowledge gaps. The following section describes the extent and impact of platform-enabled trade. Section three focuses on a new database on policies and practices that are key to driving SMEs' use of platforms for trade and presents data from the policy mapping and measurement tool. Section four turns to the results of the analysis and previews empirical findings on the relationship between policy environment and platform-enabled trade. Section five summarizes findings and provides a policy roadmap for countries at different levels of development and adoption of good policies and practices mapped here. Section six discusses potential future extensions of this work.

III. EXTENT AND DEVELOPMENT EFFECTS OF PLATFORM-ENABLED TRADE

Ecommerce has revolutionized SMEs' opportunities to sell to new markets. Studies show that using the Internet, companies of all sizes are more visible to prospective customers around the world and more poised to export and import and scale their sales across markets. Empirical work further suggests that online ecommerce platforms are particularly powerful catalysts of SME exports. Platforms such as eBay, Etsy, PayPal, Amazon, Alibaba, Jumia, MercadoLibre, Flipkart, and TradeKey, among others, instantly connect SME sellers to hundreds of millions of buyers worldwide, enabling SMEs to overcome the high costs associated with identifying international customers and gaining their trust.[1]

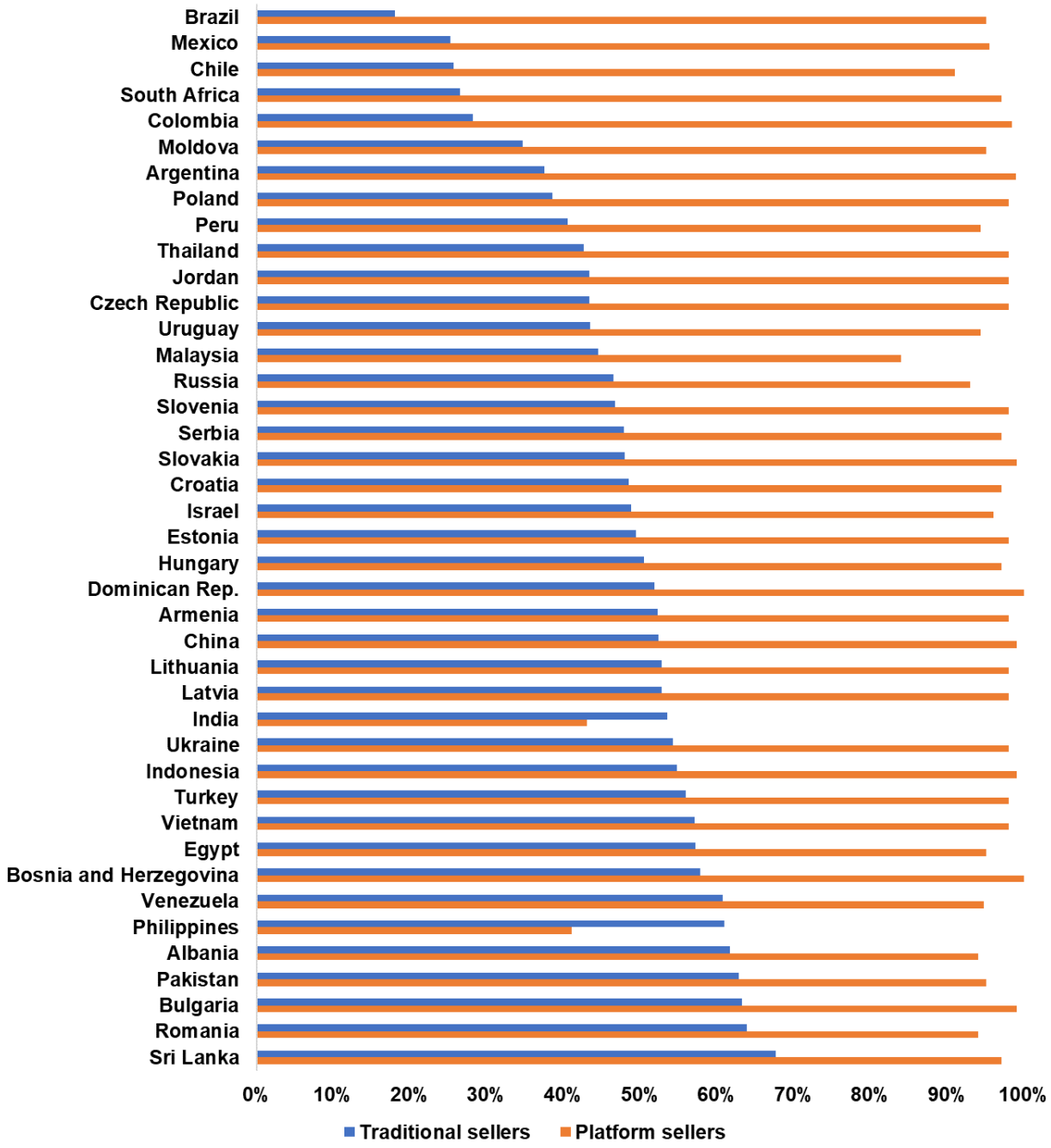
Empirically, companies that sell on platforms are much likelier to export goods and services than their peers that do not sell online. Data drawn on SMEs' transactions on selected global ecommerce platforms show that practically all platform sellers in the analyzed countries export, while only 25 percent of the "traditional" manufacturing companies export (figure 1). Platform sellers also receive a very high share, or 94 percent, of their total revenues from exports. Meanwhile, traditional exporters on average receive 48 percent of their revenues from exports (figure 2).

FIGURE 1 - % OF FIRMS THAT EXPORT, MANUFACTURERS VS. PLATFORM SELLERS



Sources: Enterprise Surveys (World Bank), various industry sources, and firm-level surveys by Suominen (2017).

FIGURE 2 - % OF TOTAL SALES FROM EXPORTS, TRADITIONAL EXPORTERS VS. PLATFORM SELLERS



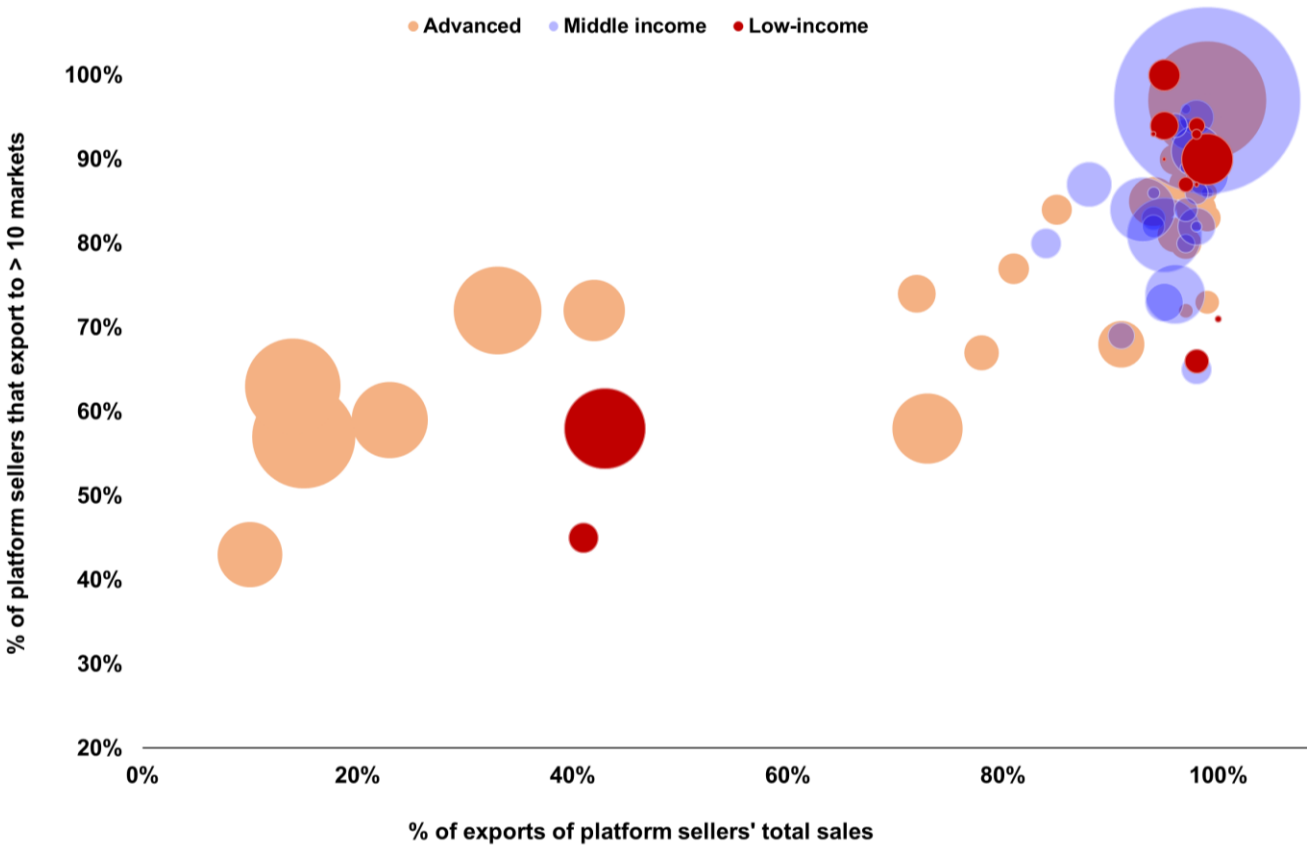
Sources: Enterprise Surveys (World Bank), various industry sources, and firm-level surveys by Suominen (2017).

Platforms appear to enable companies around the world to engage in trade. One key reason is that selling on platforms lowers the fixed costs for companies to export and import. For example, bringing tens of millions of buyers worldwide to explore sellers' goods on a single platform, platforms can drastically lower sellers' customer acquisition costs, particularly in foreign markets.

Platforms also lower the informational costs between the parties. For example, customer reviews posted on platforms on the various sellers and their products lower buyers' time and cost of screening sellers, and help well-performing sellers signal their quality and quickly gain buyers' trust. Ecommerce platforms such as Amazon and payment platforms such as PayPal also critically lower SMEs' fixed and variable costs related to end-to-end fulfillment and cross-border payments. That platforms enable SMEs to do cross-border business with greater ease and lower cost is likely one of the reasons why online sellers' have greater productivity growth than do offline sellers.[2] This matters: productivity gains are key to economic growth and improved standards of living in developing countries.

Platforms are particularly important enablers of developing country SME exports. In small developing countries, 90-100 percent of platform sellers export on platforms, 90 percent of them export to more than 10 markets, and companies that export on platforms derive on average 96 percent of their platform revenues from exports (figure 3). Meanwhile, some 70 percent of developed country platform sellers export, about 50 percent sell to more than 10 markets, and sellers that do export derive 50-60 percent of their sales form exports. In other words, while platforms are a very important means for developed country businesses to expand their sales across borders, they are an extraordinarily useful means for *developing* country companies to expand their export sales.

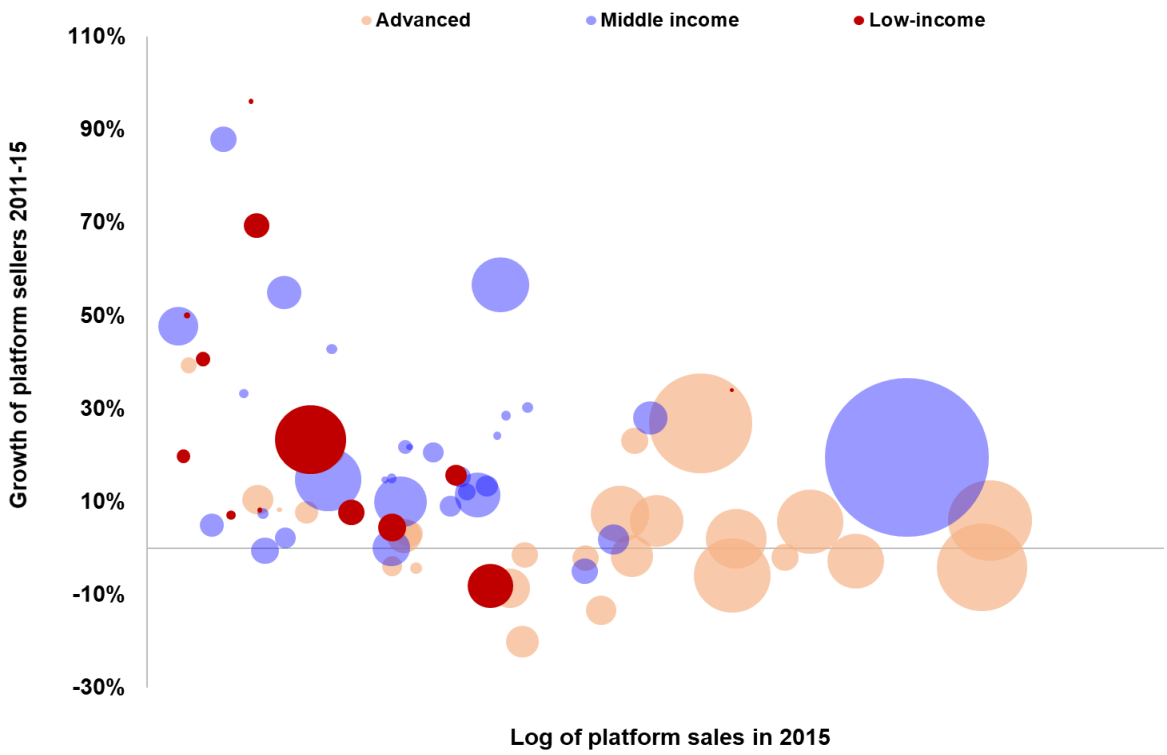
FIGURE 3 - % OF PLATFORM SELLERS' REVENUES STEMMING FROM EXPORTS AND % OF SELLERS EXPORTING TO 10 OR MORE MARKETS BY COUNTRY (SIZE OF BUBBLES IS GDP IN CURRENT US$)



Sources: World Development Indicators, various industry sources, and firm-level surveys by Suominen (2017).

The growth in the number of platform sellers has in recent years been significantly higher in emerging and developing countries than in advanced economies, which implies that developing countries have been catching up with advanced economies in the usage of platforms (figure 4). The number of online sellers is growing multiple times faster than overall economic growth in these economies. Growth does remain robust in several advanced economies that already have a great deal of platform-based commerce and that probably had their growth spurt some years earlier.

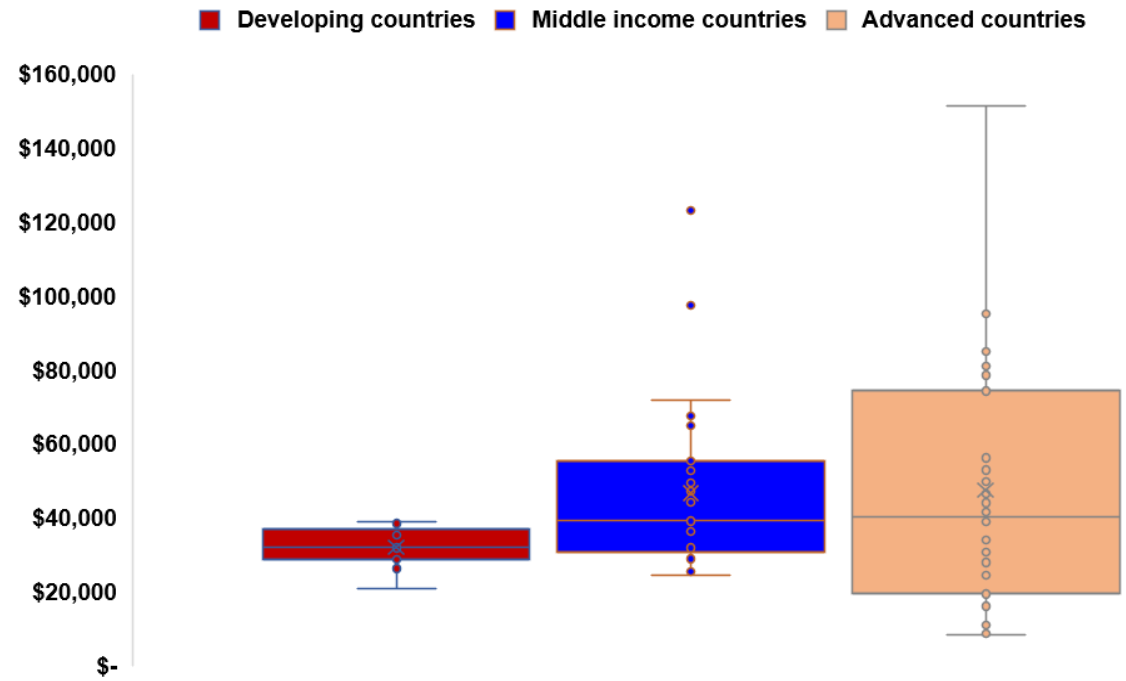
FIGURE 4 – GROWTH OF PLATFORM SELLERS AND SIZE OF PLATFORM SALES IN 2011-15, BY COUNTRY TYPE (SIZE OF BUBBLES IS GDP IN CURRENT US$)



Sources: World Development Indicators, various industry sources, and firm-level surveys by Suominen (2017).

Platform-enabled trade appears to be very important for developing country companies that are selling on platforms. Developing country companies that export on platforms, particularly companies in middle income countries, tend to have very similar export sale volumes as do platform-based exporters in developed countries (figure 5). In other words, developing country sellers that sell on platforms do not just sell a few items every now and then; rather, they have substantial export volumes on platforms, well into five and six figures.

FIGURE 5 - PLATFORM SELLERS' ANNUAL EXPORT SALES, BY COUNTRY GROUPING

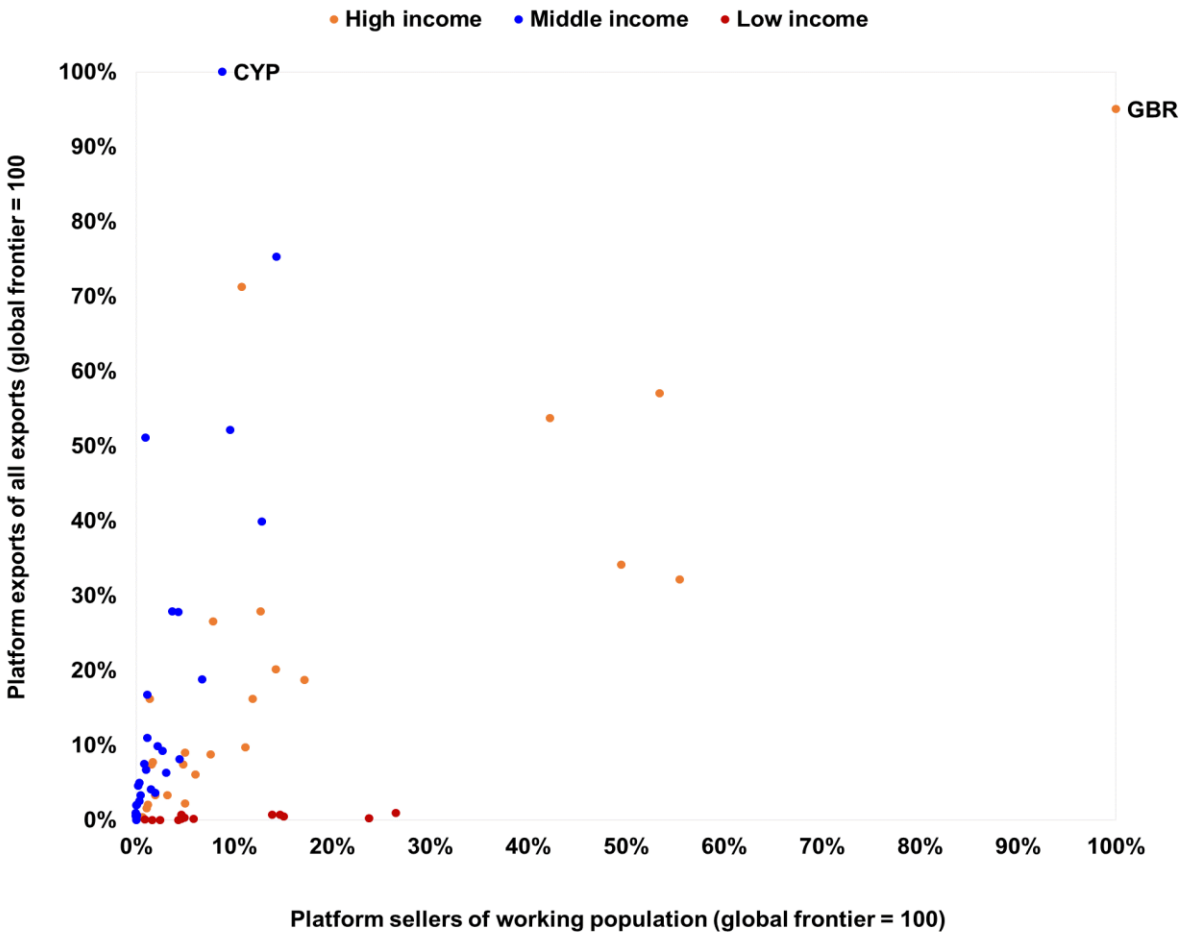


Sources: World Development Indicators, various industry sources and firm-level surveys by Suominen (2017).

However, the usage of platforms, both in terms of the number of sellers using platforms and platform sales as a share of all retail sales and exports, is considerably higher in advanced economies than in developing countries. Usage of platforms is still very low in most developing countries, compared to that of advanced nations. In the dataset analyzed here, the UK has the highest share of platform sellers per working population, or "seller density". It as such the "global frontier" on the x-axis of figure 6. A handful of advanced economies are 50-60 percent from this global frontier, and most developing countries have seller density that is less than 10 percent of UK's seller density. Seller density in least developed countries is barely one percent of the seller density of the UK.

Similarly, Cyprus in this dataset has the highest share of platform exports of all exports, and is as such the global frontier in that dimension (depicted on the y-axis in figure 6). The share of platform sales of all exports in the UK is close to the level of Cyprus, or 96 percent from the level of Cyprus. Two middle income nations are 70-75 percent from Cyprus, and again most developing countries are 30 percent or farther from the global frontier of platform exports established by Cyprus. In other words, even though platform-enabled trade has been growing in developing nations in particular, the usage of platforms is still much rarer in developing countries than in many advanced economies, as are export sales made via platforms. Granted, the data here are mostly data from platforms that were originally started in advanced economies. This means these data may somewhat underestimate developing country firms' platform use – but overall they echo other studies that show that the level of online retail sales is much higher in UK and advanced economies than in most developing economies.

FIGURE 6 - DIFFUSION OF PLATFORM USAGE AND SALES: DISTANCE FROM THE GLOBAL FRONTIER (100%)



Sources: World Development Indicators, various industry sources.

The diffusion of platform usage across economies has benefits that span export gains. For example, platforms can reduce in-country disparities. A study by Economic Innovation Group shows that while one-half of new enterprise formation in the United States in 2010-14 was concentrated in the 20 largest counties such as Los Angeles or New York counties in seven states that represent 20 percent of Americans, the world of eBay sellers was much "flatter".[3] Only 38 percent of new sellers on eBay are in the 20 largest counties; one-half of the net increase in eBay sellers came from 75 counties spread across 24 states and accounting for 36 percent of Americans.

IV. METHODOLOGY FOR A DATABASE ON POLICIES KEY TO PLATFORM-ENABLED TRADE

Enabling SMEs to use global ecommerce and payment platforms appears to be an effective means to propel SME exports and productivity in developing countries. However, developing country SMEs, and particularly rural and women-led companies, face several barriers to making most of the opportunity opened by platforms to engage in trade. Data from a USAID-supported survey administered by Nextrade Group in 2016-17 in 18 developing nations in Africa, Asia, and Latin America indicate that these many barriers include inadequate or restrictive digital, ecommerce, and payment regulations; inadequate access to working capital and online loans and other digital finance; inefficient customs procedures, logistics, and postal systems; entrepreneurs' lack of skills for cross-border ecommerce; gaps in cross-border online payments; and trading partners' duties and taxes.[4] The very same challenges are highlighted by Latin American companies in two other Nextrade Group surveys carried out in the Southern Cone and Central America.

While the order and magnitude of these challenges vary by country, for example with African SMEs being most hampered by lack of trade finance and Latin American companies struggling with cross-border logistics and customs, overall developing country companies are dissatisfied with the environment for doing ecommerce and selling on platforms. For example, small companies in Latin America and Asia give their countries' enabling environments for cross-border ecommerce a poor rating – a score of 5-6 out of a maximum of 10 in Latin America and 4-5 out of 10 in Africa and developing Asia.

The various constraints for SMEs in developing countries to use global platforms make them to forgo new customers, export opportunities, and growth gains. The opportunity cost for developing country companies and economies is significant. For example, in the Nextrade Group survey, developing country businesses estimate they would score annual revenue gains of 34 percent in their domestic markets and 30 percent in international markets if the top-3 obstacles to their ecommerce operations were removed.

Of course, poor enabling environments for platform-enabled trade are detrimental also to platforms themselves, and can deter platforms from making requisite investments to service certain developing countries. Poor enabling environments for platform-enabled trade in developing countries also impede advanced country SMEs from growing their online exports to developing nations.

While many governments are gaining a better understanding of the challenges SMEs in their countries face to doing ecommerce, they tend to lack knowledge of the specific policies and practices that would remove these frictions. This report starts mending this knowledge gap. We offer developing country policymakers a roadmap of good policies and practices that enable their countries' SMEs to export and import on global online platforms – and for platforms to operate in their countries and serve SMEs. This report also provides an empirical mapping and measurement of these policies and practices in 40 countries around the world, and several case studies of good practices that illustrate how various advanced and developing countries have gone about pursuing ecommerce-friendly policies and practices. The mapping and case studies enable countries to rigorously compare their own policies to the policies and practices of their peers, and, most critically, learn from each other.

A. CHOICE OF VARIABLES AND METHODOLOGY FOR POLICY ANALYSIS

Figure 7 describes the analytical framework for this project: with good, "model" regulations, policies and practices in place, countries are excepted to be well-placed to expand SME trade on platforms, and, over time, spur trade and development gains.

FIGURE 7 - ANALYTICAL FRAMEWORK

What, then, are the good regulations, policies, and practices that developing countries should consider, in order to propel platform-enabled trade and ecommerce in their economies?

This question was approached here in three ways: (1) analysis of the priority challenges to ecommerce highlighted by SMEs in various developing countries in surveys run with USAID's support in 2016-17; (2) dialogues with the partners to this Global Development Alliance and selected other ecommerce platforms and logistics providers on their views on policies conducive to platform-enabled trade; and (3) an academic literature review on research results on the impact of such policies on trade, ecommerce, and development. This method paved the way for the selection

of actionable and empirically sound components in the analysis – components that are grounded in academic research, but that also, when put in place, can substantially help SMEs engage in trade on platforms. The literature review for each variable is incorporated in an abbreviated version in Section IV below.

The result of this methodology led to the inclusion of six components in the analysis:

- Digital infrastructures, such as incentives for broadband usage and pilots to roll out 5G networks;

- Ecommerce and digital regulations, including such issues as internet intermediary liability rules, copyright protection, consumer protection, data and privacy rules;

- Online payment regulations, including policies key for payment platforms to operate and for SMEs to use online payments;

- Ecommerce logistics and trade facilitation, including policies and processes to sending and receiving goods across borders and shipping them in urban and rural areas;

- SME capacity-building for ecommerce exports, such as online training programs for SMEs to learn how to use online platforms and digital transformation programs for SMEs to bolster their online sales and marketing capabilities; and

- Access to credit, such as working capital, credit guarantees, venture capital, and Fintech regulations.

Empirical literature, industry dialogues, and SME surveys alike strongly suggest that these policy areas are essential for ecommerce and platform-enabled trade to work – and surveys with SMEs seeking to engage in ecommerce strongly suggest that developing countries have a great deal of room to improve policies in these areas. Furthermore, there are certain key elements within each of these areas that are particularly relevant for propelling SMEs' use of platforms for cross-border trade. We identified 60 such sub-components; these are listed in Appendix I. These sub-components also cover two dimensions important to inclusive trade – gender (policies and programs to support women) and innovation (seminal policies and programs that can create significant new gains, such as open banking practices and use of blockchain in customs).

What, then, are countries around the world doing in these various detailed policy areas? How are they adjusting their regulations, policies and practices that facilitate SME trade on platforms?

We explore these questions in a granular and rigorous fashion in two stages. The first stage involves mapping countries' practices in the various policy areas on an Excel, with cells consisting of qualitative summary information of how a given country regulates or approaches a given policy issue. The mapping was accomplished through extensive desk research and industry inputs and concluded in April 2018.

The policy mapping is in and of itself useful for governments to see what their peers are doing in the many different areas pertinent to platform-enabled trade, and draw inspiration from good and innovative practices around the world. Using the mapping, a policymaker can compare his or her country to any other country mapped in any one policy area. Or, if interested in any one area such as postal innovations for ecommerce logistics, he or she can readily see what 39 other countries are doing in this area.

Table 1 lays out the countries mapped. The country selection is to ensure countries with different levels of development and from different regions are considered. A few advanced economies were chosen as putative benchmark countries.

TABLE 1 - 40 COUNTRIES MAPPED

East Asia	South Asia	Latin America and the Caribbean	Africa	Advanced
Cambodia	Bangaldesh	Argentina	Ghana	Canada
China	India	Brazil	Kenya	Japan
Indonesia	Pakistan	Chile	Morocco	Singapore
Laos, PDR	Sri Lanka	Colombia	Mozambique	South Korea
Malaysia		Costa Rica	Nigeria	UK
Myanmar		Dominican Rep.	Rwanda	
Philippines		Ecuador	South Africa	
Thailand		El Salvador	Tanzania	
Vietnam		Guatemala	Uganda	
		Mexico	Zambia	
		Peru		
		Uruguay		

The second stage of the analysis is to enable countries to quickly navigate the maze of qualitative data produced in the mapping to compare themselves to their peers in the adoption of policies and practices conducive to platform-enabled trade. Here, we convert the qualitative data into a country-specific quantitative score. The scoring methodology is as follows: if a country has a desirable regulation, policy or practice in place, it receives a score of 1 (or, in some areas, a maximum of 0.5). In some cases particular improvements (such as a digital trade single window that has been upgraded to provide B2B services to the trade ecosystem) merit extra 0.5 points. If a country has a draft law or policy planned, it receives 0.5 points instead of 1 point. The total possible score is 60, roughly equally distributed across the six major policy components.

The scoring varies somewhat by the type of question asked, as follows:

- Some of the areas covered are straight-forward yes / no questions (such as whether a country has implemented electronic payment of duties). These are simple to map; they are either 0 or 1. In the area of data transfer rules, in cases where a practice or regulation has restrictive limitations or exceptions, the score of 1 was reduced by -0.33 by each limitation or exception.

- Other areas require more analysis and interpretation. One such area is whether a country's postal service is innovating in ecommerce. In this set of areas, we establish criteria that merit a score of 1 (such as, a score of 1 on postal innovation is assigned if a country's post has piloted with one or more of the following: parcel lockers, self-service kiosks, drone delivery, ecommerce fulfillment centers, or partnerships with ecommerce platforms).

- Still other areas are scored by using a pre-existing index or dataset; some examples include customs tariffs on ICT products and level of postal development. In these cases, we translate different numbers and indices into a standardized index, employing the "distance from the

frontier" score used in the World Bank's Doing Business, where the globally worst performer gets a zero and the globally best performer receives a score of one, and everyone else falls in the continuum between 0 and 1. The formula for this calculation is (worst performer score – country score) / (worst performer score – best performer score).

As is common in the creation of a policy index, there are several qualifications and limitations to our methodology; these are described in Appendix II.

V. RESULTS OF POLICY MAPPING

The data resulting from the mapping show that advanced economies have adopted many policy measures mapped here, while developing countries in Africa and South Asia tend to lag behind (figures 8 and 9). Overall, advanced countries and selected emerging economies of Southeast Asia and Latin America have adopted 60-70 percent of all policies and practices mapped, while poorer developing countries in Africa, South Asia, Southeast Asia, and Latin America have adopted only 20-35 percent of these practices. In the top quartile of countries with highest policy coverage are the five advanced economies (UK, Canada, Korea, Japan, Singapore), three Southeast Asian nations (Indonesia, Thailand, and Malaysia), as well as Mexico and China. Thailand, Malaysia, Mexico, China and Rwanda outperform their peers at the same level of development in the adoption of the mapped policies (figure 10).

FIGURE 8 - COVERAGE OF POLICIES CONDUCIVE TO PLATFORM-ENABLED TRADE, BY REGION AND MAIN POLICY AREA

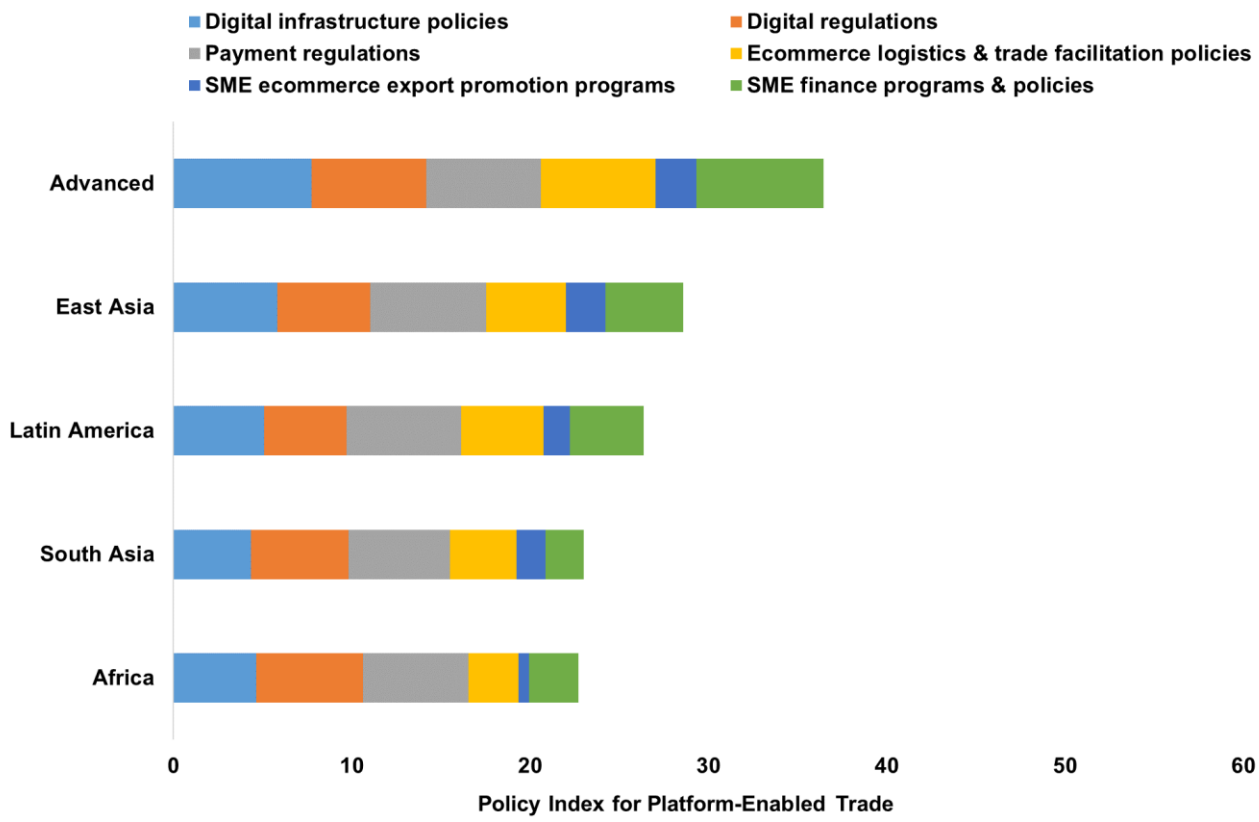


FIGURE 9 - COVERAGE OF POLICIES CONDUCIVE TO PLATFORM-ENABLED TRADE, BY COUNTRY AND MAIN POLICY AREA

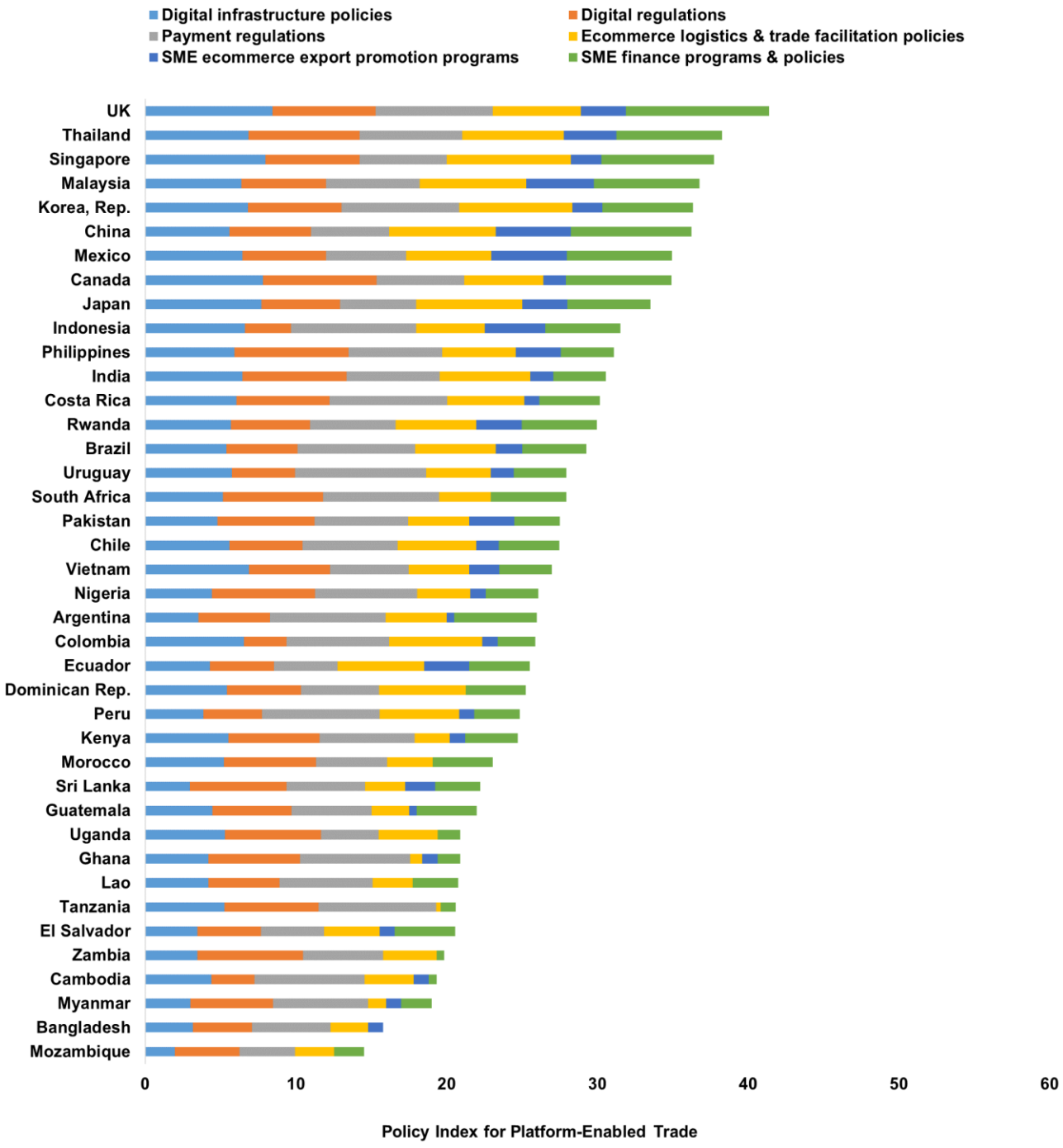
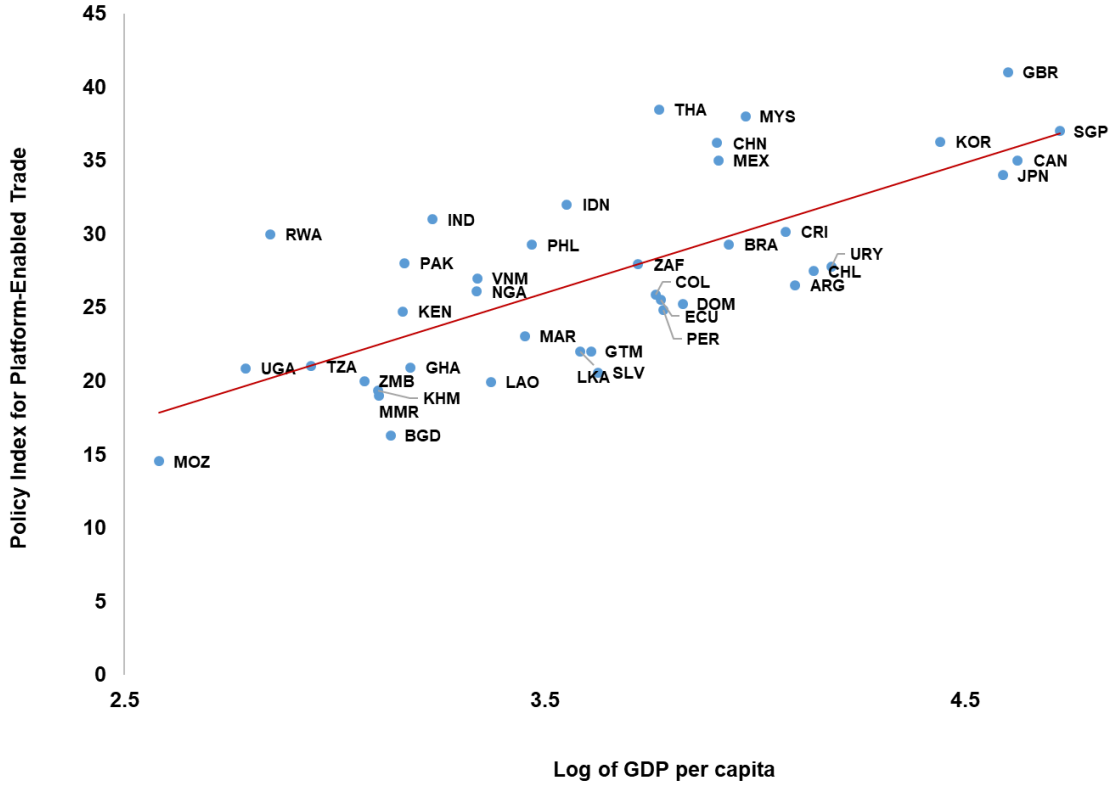


FIGURE 10 - POLICY INDEX FOR PLATFORM-ENABLED TRADE AND LEVEL OF DEVELOPMENT



Source for GDP, World Development Indicators.

The policy index developed here is highly correlated with the level of platform-enabled trade in the economy for countries for which data are available: countries such as Singapore, UK, Thailand, and Malaysia that have great deal of platform-enabled trade also tend to have many of the mapped policies and practices in place (figure 11). The index is also correlated with Nextrade Group's Ecommerce Development Index developed with USAID's support and based on business surveys in developing countries (figure 12). Countries where companies report greater struggles to use ecommerce for trade due to regulatory, logistical, payment, and other reasons also tend to have a low number of good policies in place.

Granted, on the basis of this analysis we cannot say that certain policies have *caused* certain economic outcomes. What can be said is that countries that have adopted practices conducive to platform-enabled trade and that score high on our policy index also have the most vibrant ecommerce economies and most platform-enabled trade in their economies.

FIGURE 11 - POLICY INDEX FOR PLATFORM-ENABLED TRADE AND TRADE ON PLATFORMS IN 2018

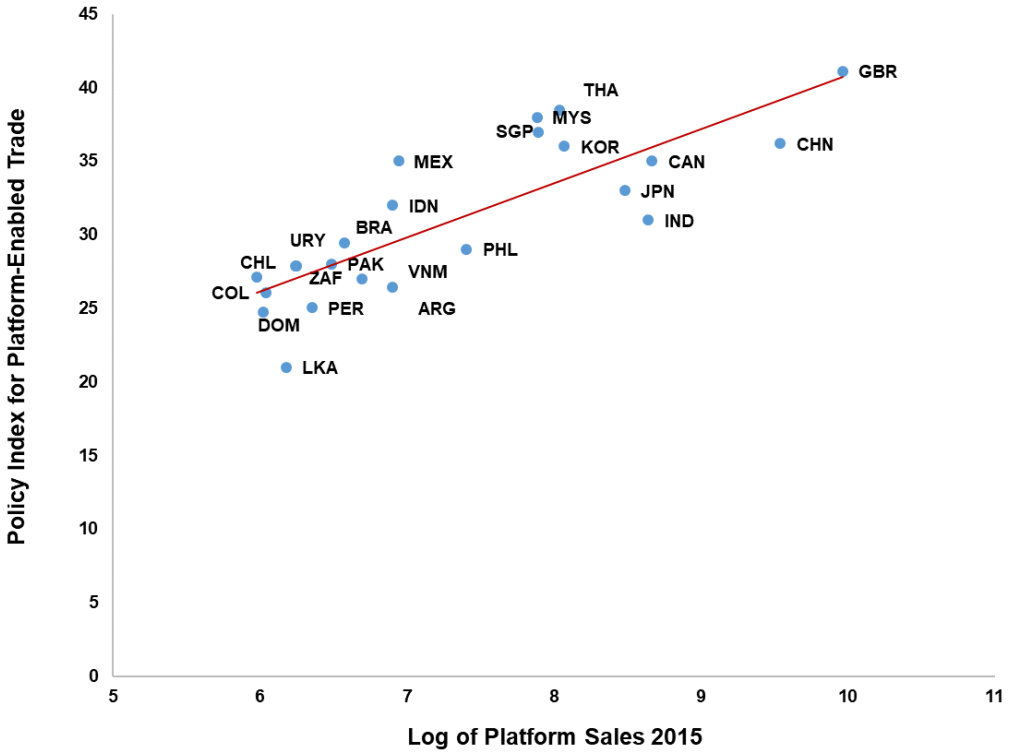
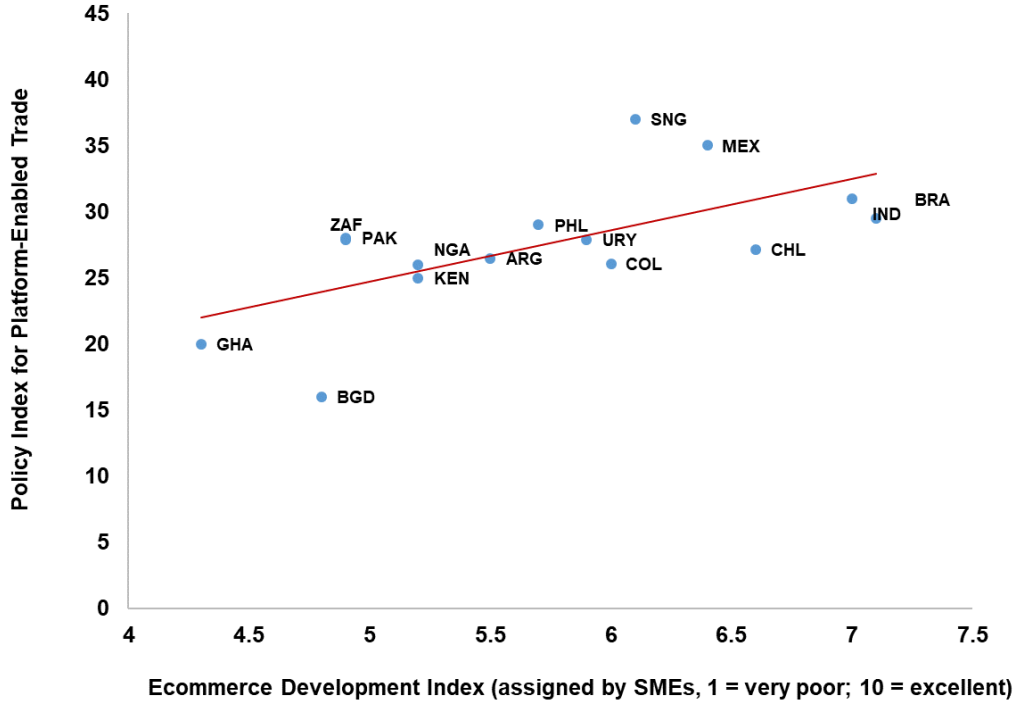


FIGURE 12 - POLICY INDEX FOR PLATFORM-ENABLED TRADE AND ECOMMERCE DEVELOPMENT INDEX



Source for Ecommerce Development Index, Suominen (2017).

A. EMERGING POLICY INNOVATIONS AND GOOD PRACTICES TO FUEL PLATFORM-ENABLED TRADE

A further analysis of the data suggests that many countries have adopted the easier, "low-hanging fruit" policies, such as made customs information available online, adopted digital signatures laws, and provided guarantees for loans issued by banks to SMEs. However, yet to be adopted are such essential policies as safe harbors that enable ecommerce platforms to operate with greater ease, online dispute resolution systems that help build consumers' trust in trade on platforms, and export promotion practices and financing programs that enable SMEs to digitize and use online platforms for trade. Some countries are turning away from good practices in such areas as *de minimis* that facilitates customs clearance of low-value items, and fluid cross-border transfer of data that helps online sellers and platforms better service their customers in other countries. Most countries have also yet to mainstream support for women-led firms into their policies and programs aimed to support SMEs in ecommerce.

The following sections discuss these patterns in greater detail, and provide case studies of innovative practices pursued by both advanced and developing countries.

Digital Infrastructures

The Internet and fixed and wireless broadband are pillars of platform-enabled trade, and ecommerce and trade in general. For example, one study finds that the expansion in broadband use in a broad sample of countries in 2000-11 increased trade-to-GDP ratio by 4.2 percentage points.[5] The Internet is also found to reduce the costs of moving products and services from the seller to the buyers; for example, U.S. digitally intensive goods and services traded online have 26 percent lower trade cost that do goods traded offline.[6]

The 2017 Nextrade survey of 3,500 companies in developing countries echoes the need for better Internet connectivity to ecommerce: in least developed countries, small businesses highlight lack of good connectivity and IT infrastructures as a leading impediment for them to engage in ecommerce.[7] The challenge is amplified in remote and rural areas.[8] Other research indicates that small and medium-size enterprises that are heavy web users are almost 50 percent likelier to sell products and services in foreign markets, and that firms with high-speed broadband and mobile connections are much likelier to engage in ecommerce, particularly if their Internet connection speed is higher than 30 Megabits per second (Mbps).[9] High-speed connectivity provided by fixed and mobile broadband is a critical enabler of online services and applications, streaming, browsing, and instantaneous transactions.

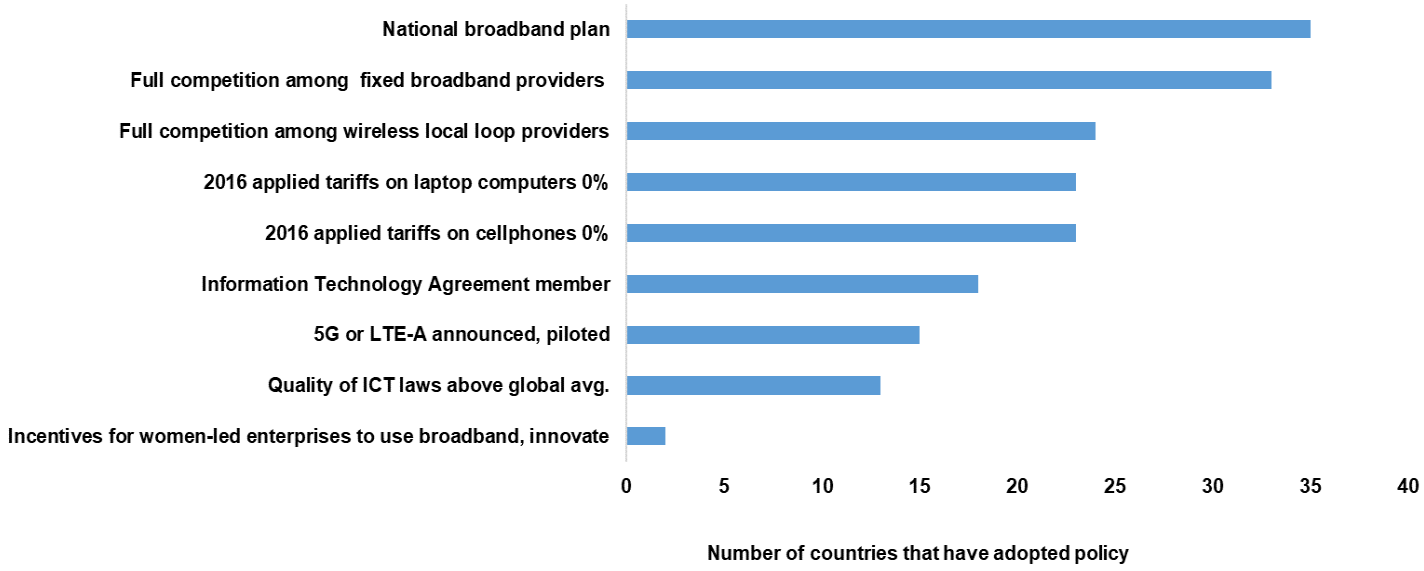
Empirical work shows that the combination of supply-side policies (such as long-term broadband development plans and PPPs) and demand-side policies (such as provision of financial incentives for businesses to adopt broadband) best accelerate the diffusion of broadband when broadband penetration is low.[10] In the countries mapped here, 35 countries have adopted a broadband plan, and 33 have also adopted policies to further competition among broadband providers (figure 13). Such competition matters: it is found to raise broadband penetration rates especially in the initial stage when the market is just starting, and later in the advanced stages.[11] In the early stages, competition can accelerate coverage; in the advanced stages, competition drives providers to seek customers in the more remote and rural areas after the "low-hanging fruit" of urban broadband connections is harvested and each provider has only scant opportunities to lower prices to reap new market share.

In addition to basic broadband, fast and high-capacity 5G connectivity is a future differentiator in the global ecommerce market, where sellers are increasingly using virtual and augmented reality tools to enable consumers to browse and test products (case 1). However, only 18 countries have so far

adopted a 5G plan or allocated spectra for it – or even started using the so-called 4.5G or LTE-A connection.

The cost of devices such as mobile phones and laptops is often a leading impediment to the diffusion of the Internet in developing countries. Tax and tariff cuts on ICT products are among key policies to propel technology diffusion and ecommerce. For example, participation in the 82-country Information Technology Agreement that removes tariffs on 97 percent of ICT products is found to increase Argentina's economic growth by 1.5 percent and Pakistan and Kenya's by 1.3 percent.[12] Of the countries mapped here, 18 have joined ITA, and 23 have zero duties on mobile phones and laptops. However, five countries still have over five percent tariffs on essential ICT products.

FIGURE 13 - NUMBER OF COUNTRIES THAT HAVE ADOPTED DIGITAL INFRASTRUCTURE POLICIES CONDUCIVE TO PLATFORM-ENABLED TRADE, BY AREA (OUT OF 40 COUNTRIES IN TOTAL)



Case 1: 5G Era – Korea Paving the Way

The 5G connectivity is transforming global ecommerce markets, particularly to enable sellers to use virtual and augmented reality tools to enable consumers to browse and test products. For example, the Swedish household product and furniture retailer IKEA has created an augmented reality catalogue app that works especially well on 5G to help customers visualize how their selected IKEA furniture would fit and look in their own homes.[13] Clothing makers such as Adidas have used augmented reality to enable customers find the right fit. These same tools can transform online learning – consider, for example, digital textbooks and augmented reality programs. Offering such immersive experiences will also be a key competitive advantage for 21st century online businesses.

Some 78 percent of telecom operators are globally piloting 5G, and the technology is expected to be more mainstream in 2018 and 2019.[14] Many advanced country governments have launched 5G plans, often in close partnership with the private sector. In 2017, Australia announced a 5G policy, including the establishment of a working group to collaborate with industry, making spectrum available in a timely manner; taking part in the international standardization process; and reviewing telecommunications regulations to ensure they enable 5G.[15] Positively, some developing countries such as India have set

targets for 5G rollout; Ericsson has piloted 5G in India believes 5G will enable a $27.3 billion revenue for Indian telecom operators by 2026.[16]

Many developing countries are still working to roll out 3G and 4G networks. Yet the 5G era is approaching and the technology will be a key differentiator; in a survey of over 3,000 industry leaders from around the world, 83 percent expect 5G to catalyze small business growth, but also tighten global competition – and nearly 70 percent are concerned that without 5G, their country will become less competitive in the online economy.[17]

South Korea has had a strong national focus since the 1980s on high-quality and high-coverage internet. It has the world's fastest internet (at 41 Mbps in 2016) and has become one of the first countries to formally announce the adoption of a 5G mobile network, with a target of 90 percent 5G penetration by 2026. [18] According to the Korean telecom operator SK Telecom, 5G has in demos been yielding speeds of up to 19.1 gigabits per second, nearly 1,000 times faster than 4G LTE users enjoy. That speed would enable a movie download in fractions of a second, and power sectors where lags in data transmission can be life-threatening, such as when driving a car and depending on the network for navigation, or when a surgeon is operating remotely from a virtual reality headset.

In addition to low latency, 5G offers high capacity to transmit information. It is as such poised to fuel the digitization of Korean industries and power the machine-to-machine dialogue and transfer of large-scale data essential in Internet of Things. It is also expected to benefit consumers and companies in such sectors as media and entertainment, public transport, healthcare, energy and utilities. Globally, IHS Markit estimates that 5G can unlock up to $12.3 trillion of revenue across a broad range of industries.[19]

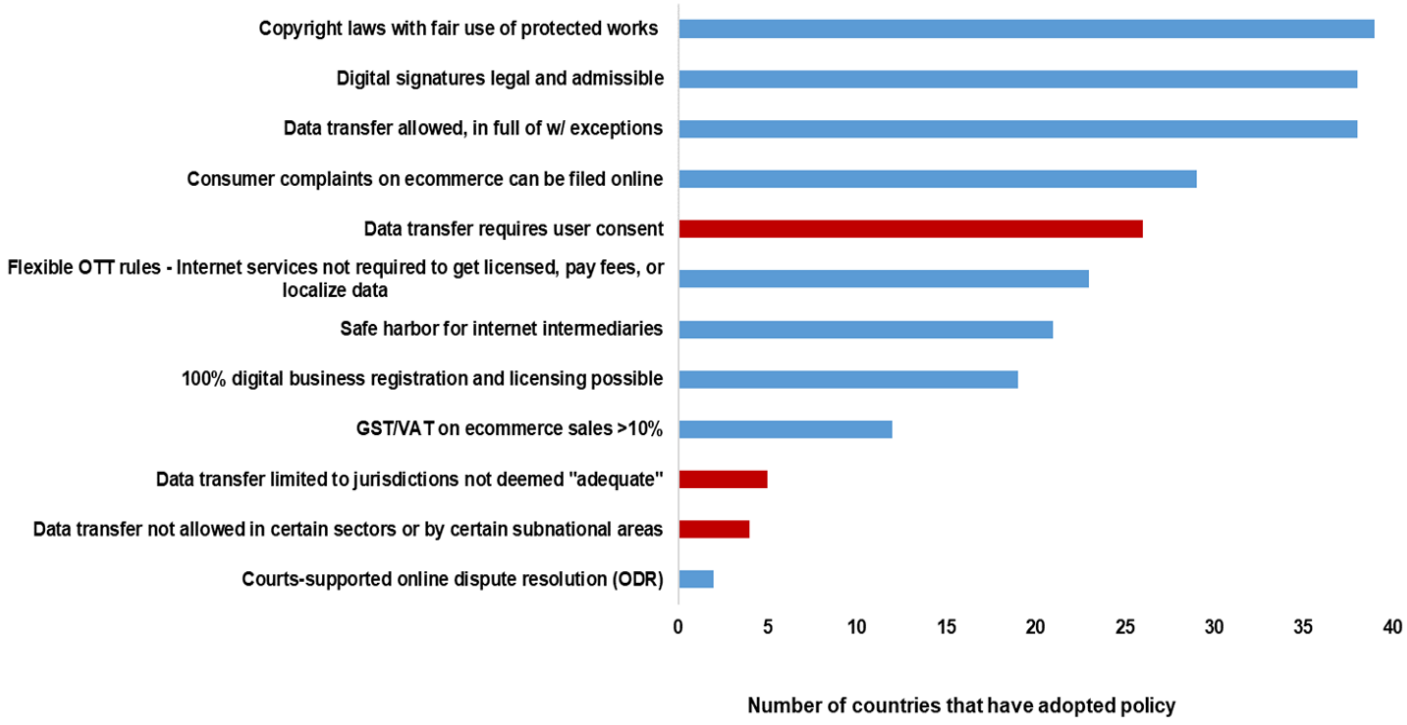
5G is capital-intensive – it requires a change in transport, radio, and core network components. The Korean Ministry of Science, ICT and Future Planning has made significant investments in these elements. It has also created a "5G Strategy Promotion Committee," a public-private consultative group with telecom and industry leaders from automotive, healthcare, education, and other sectors that is studying 5G converged services.[20] Some 20 Korean industry and academic experts regularly meet to analyze and create 5G converged test beds and to improve regulations around the technology.

For their part, Korean telecoms SK Telecom and LG U+ have already been venturing into ecommerce, offering cellular-based wireless payment platforms that allow small retailers, traders and vendors to transact.[21] 5G networks are expected to enable Korean operators to amplify these capabilities and provide new services for industry, government, and consumers.

Digital regulations

Clear and non-restrictive digital regulations are essential for online platforms to operate and service SMEs, and for SMEs to be able to transact online. Many developing countries have yet to adopt the various regulations that have helped digital business flourish in advanced economies. One such key regulation that has yet to be widely adopted is a legal liability regime that provides internet intermediaries immunity, or a "safe harbor", from the content their users post on their portals or platforms (figure 14). Brazil stands out; its renowned safe harbor regime sets appropriate limits on the responsibility of providers for hosting or transferring third-party content. The regime is analogous to section 230 of the Communications Decency Act in the United States.[22] Its success owes in part to how it was crafted: through a multi-stakeholder drafting procedure among different interest groups, such as Internet companies and civil society.[23] Companies implementing the law see it as a major improvement to the previous, more ambiguous liability law (case 2).

FIGURE 14 - NUMBER OF COUNTRIES THAT HAVE ADOPTED DIGITAL REGULATIONS CONDUCIVE TO PLATFORM-ENABLED TRADE, BY AREA



Case 2: Internet intermediary liability – Brazil

Internet intermediaries such as ecommerce, payment, and social media platforms fuel the flow of information online by helping individuals and companies find, share and access content and interact and transact with each other. This in turn improves growth and productivity of other firms in the economy. Copenhagen Economics found that internet intermediaries increased EU GDP by €430 billion in 2012, or about 3.3 percent of EU's GDP; of this, €220 were gains from investment, private consumption, and exports, while €210 billion was indirect effect of productivity increases in firms serviced by intermediaries.[24] Additional €640 were consumer benefits from free services, increases in online advertising, and B2B platform revenues.

In turn, unclear and restrictive liability and copyright regulations deter investors. Regulations holding internet services liable for user-generated content are found to reduce the pool of investors interested in investing in such services by 81 percent. [25] Meanwhile, clarifying copyright regulations to allow websites to resolve legal disputes quickly would expand the pool of interested investors by 111 percent, and limiting penalties for websites acting in good faith would expand the pool of interested investors by 118 percent.[26]

As a result of these considerations, many countries have put in place liability laws, typically referred to as "safe harbors", that provide internet intermediaries immunity from the conduct of their users. Safe harbors also protect intermediaries from user-generated content, such as when that content violates a third party's copyright.

The Brazilian liability regime is often lauded as a global best practice. In its Marco Civil Internet law of 2014 that defines Internet users' rights, Brazil has a "safe harbor" that sets appropriate limits on the responsibility of providers for hosting or transferring third-party content. The law was a hard-won

compromise between different interests such as Internet companies and civil society, which engaged in a participatory, multi-stakeholder drafting procedure.[27]

The Brazilian regime is analogous to section 230 of the Communications Decency Act in the United States, which is hailed as key for the growth of American online platforms.[28] It covers Internet service providers (ISPs) and Internet application providers (IAPs), such as social media websites and search engines for third-party content, and protects them from civil liability arising from damages related to hosting content generated by third parties.[29] IAPs' liability is limited to cases where they fail to remove damaging content in a timely manner after a judicial order or, in cases of sexual content or nudity, after the request of the injured party or its legal representative. In general, however, internet intermediaries are under the law seen as conduits of information, not its generators. Also Chile's copyright law of 2010 specifies similarly that internet intermediaries are not liable for user content on their sites if they take appropriate actions in response to official notices.[30]

Several countries are currently pursing reforms in their data privacy and cross-border data transfer regimes. The most notable example is Europe's General Data Protection Regime (GDPR) that took effect in May 2018 and applies also to non-EU companies that deal with Europeans' data. GDPR is in simulations and surveys shown to impose heavy implementation costs on companies seeking to operate in Europe – and is expected to have negative impacts on European consumers' enjoyment and cost of retail, financial, and other services.[31]

So far, most of the mapped 40 countries allow cross-border data transfer (some simply because they do not have data regulations yet in place), but also 26 countries require user consent as a pre-requisite for the transfer of data. Some limit data transfer also in certain sectors and geographies. For example, in Latin American countries, user consent alone justifies transfer of data, while Nigeria additionally requires that the foreign country where data are transferred has adequate data protections. In some countries such as Canada, state and provincial governments have their own regulations on data transfer. Positively, some economies such as Costa Rica and Colombia have recently found ways to relax their data regimes to accommodate the needs for globalizing companies and foreign investors, without sacrificing data privacy (case 3).

Case 3: Data transfer rules – Costa Rica and Colombia on a reform path

Companies that are platforms or sell on platforms thrive on access to data on their operations, customers, and markets. Many developing country companies and platforms have markedly improved their operations and sales after systematizing data collection and analysis from domestic and foreign customers. For example, by running its mid-Africa and Middle East online booking operations on Amazon Web Services, South African travel booking website Travelstart has realized operational cost savings of 43 percent and reduced downtime by 25 percent.[32] Using real-time data streams of its 1.5 million bookings in Southeast Asia to predict future demand patterns and correct operational problems, ride hailing platform Grab serving Singapore, Malaysia, Indonesia, Thailand, Vietnam and Philippines has realized 30-40 percent savings in operations, improved customer service, lowered the cost to customers.[33]

Many countries are making reforms to the privacy laws, to find a balance between data privacy and online services and commerce. Costa Rica and Colombia have come to realize the benefits of allowing cross-

border data transfers to attract investment in sectors such as BPO and ecommerce platforms. Both countries pursued legal reforms in 2017, prompted by dialogues between public and private sectors.

In Costa Rica, the reform terminated a previous requirement for companies to register different databases held by their different business units when those units shared information with each other. With the reform, only transfers related to the sale of that information require registration. As such, the reform facilitates internal data transfers within companies with operations in Costa Rica – while also limiting companies' ability to disseminate or sell of data to third parties. Costa Rica also dropped its unique concept of "super-user," which gave Citizens Data Protection Agency Prodhab unrestricted access to all data on all listed databases. The concept was difficult for companies to adhere to because it ran against their confidentiality agreements.

For its part, Colombia added the United States on the list of safe nations for data transfer purposes.[34] The measure was crucial for Colombia to enable small Colombian companies to use American cloud services, and to retain U.S. companies in the country.[35] Consider, for example a major industry in Colombia, call centers that serve U.S. companies needing client service in Spanish: without clear rules that specify that their data can be transferred to the United States, those companies might want to find another location for their call centers. [36] Similar issues pertain to ecommerce platforms. For example, given that it can now access user data and transfer it to San Diego, California, for analysis and improve its services in Latin America, the U.S. company PriceSmart Inc., the largest operator of online membership warehouse clubs in Central America and the Caribbean, has recently established a presence in Colombia.

Across developing countries, small online businesses tend to highlight copyright issues as a major challenge for them to engage in ecommerce. Positively, all countries mapped here have in place copyright regulations that include limitations and exceptions (such as principles of "fair use" or "fair dealing") that balance the public policy objectives of protection of intellectual property rights and the development of new Internet services. Specifically, the principle of fair use allows the use of content for certain purposes such as research without the need for permission from or payment to the copyright holder.

Another important regulatory area for platform-enabled trade to work is consumer protection. Consumers after all need to trust online sellers, ecommerce delivery, and online payments in order for ecommerce to take off. One of the best and most scalable means to build consumer trust in ecommerce is online dispute resolution (ODR), which enables prompt online dispute settlement for contractual breaches in ecommerce transactions. While of the mapped countries 29 have some method for consumers to file complaints online to a government agency, most do not have an ODR system in place. Notable exceptions are Mexico, where Concilianet, an online dispute resolution system run by the Federal Consumer Attorney's Office (PROFECO) enables prompt online courts-managed dispute resolution; and China, where the Supreme People's Court has opened a cyber-court to handle IP and ecommerce-related cases (case 4). One area highlighted by legal experts that would make ODR even more scalable is crowdsourcing of rulings from a panel of experienced buyers and sellers.

Case 4: Online dispute resolution for consumer protection – Mexico and China pioneer

Consumer trust in products and services sold online, delivery services, and online payments is essential for ecommerce markets to develop and online companies and digital economies to grow. Consumers in many countries still do not trust the online economy. In a 2017 Mobile Economy Forum survey of 6,500 consumers in 10 leading economies, 40 percent of consumers stated they do not use more apps and services because of trust concerns.[37] Such concerns can stem from bad user experiences, negative reviews, and concerns about security of personal data and identity theft. In another global survey, 86 percent of customers take some kind of remedial action as a result of trust concerns, and typically stop using the service.[38] Or they sue: in China, ecommerce-related complaints have overwhelmed courts.

One method for consumers to air grievances and seek remedies and for courts to respond promptly is online dispute resolution (ODR). Many online companies have their own dispute settlement systems: eBay, for example, has resolved 60 million minor disputes between small merchants and buyers each year through a semi-automated online system is able to resolve most disputes between buyers and sellers.[39]

Recent research suggests that government-supported ODR is accelerating the resolution of disputes in various countries and reducing personnel costs in court systems. In Mexico, Concilianet, an online dispute resolution system run by the Federal Consumer Attorney's Office (PROFECO), was created as a pilot in 2008 to enable consumers who had purchased goods or services either electronically or offline to initiate and resolve complaints or claims against major companies on an online platform. Two companies participated in the pilot; by, 2009 five joined, and by 2017, there were more than 90 participating companies, such as major airlines and retailers from MercadoLibre to Walmart.[40]

Concilianet complainants can seek an order for the merchant to comply with the bilateral contract; however, seeking monetary damages requires judicial action through traditional channels.[41] Because ODR is purported to resolve the voluminous disputes over rather small payments, there are no minimums for claims that can be brought.[42] The system is free for the consumer to use and obviates a trip to PROFECO's local office; instead, users can monitor progress with their complaints online. The hearing takes place in a virtual courtroom with all parties present. There are two potential outcomes to any one ruling: an agreement between consumer and the merchant; or a referral of the case to the competent judicial authority.

In 2008-17, Concilianet attended to 28,000 cases in eight years and resolved 94 percent.[43] In 2012, it was reported that the consumers have recovered on average 101 percent of their claims.[44] In its early days, the system was found to reduce the time for resolving disputes by nearly 50 percent.[45] Concilianet is viewed as useful for consumer trust precisely because it includes court personnel in the process.

In China, cybercrimes and ecommerce-related lawsuits have created an enormous backlog in courts. For example, Alibaba reportedly receives some 4 million customer complaints annually and cases that do not get resolved out-of-court are then taken to a court. To manage the stream of complaints, China's Supreme People's Court has opened a cyber space court to handle IP and ecommerce-related cases in Hangzhou, capital city of Zhejiang Province. The cyber-court piloted in 2018; ecommerce cases in the Hangzhou court escalated from 600 in 2013 to 10,000 in 2016.[46] In 2017, China's Central Government granted approval for the Hangzhou court to tackle all cyberspace cases in the country, including ones related to online shopping, product liability in ecommerce, Internet service contract disputes, and online loan and copyright issues. The court is armed with hi-tech devices that allow plaintiffs to file cases and upload evidence online, and judges have been trained and are well-equipped to handle larger caseloads. Complaints can be filed in five minutes; plaintiffs' identity can be verified through Alipay online or by showing their ID to a court clerk in Hangzhou.[47] Court hearings are conducted via online video sessions. Judges deliver verdicts by the Internet to deliver verdicts. In its first case – copyright infringement dispute between an online writer and a web company – the online video chat trial took 20 minutes.[48] Also UK and Canada have piloted cyber-courts.

Taxation of online transactions is another area of policy change and controversy, and one that is shaping platforms cost structures and developing country businesses' ability to sell goods and services online at home and abroad. Several countries are considering or introducing the so-called "Netflix taxes" to tax the sales of services provided by foreign internet services. For example, in January 2018, Uruguay introduced a 22 percent tax on online services such as AirBnB and Uber. Colombia has recently required banks that process card payments for online services to collect 19 percent value added tax (VAT) on those payments before the payment reaches the seller.[49] Thailand has recently updated its proposals to levy VAT on non-resident providers of electronic services to Thai consumers. VAT registration is mandatory to non-resident providers if their annual sales exceed Baht 1.8 million (about $58,000).[50] These types of taxes merit careful consideration of trade-offs. Since digital services, domestic and foreign, affect practically all industries, taxes on them can have impacts on productivity, new business creation, and investment. Furthermore, taxes can undermine a public policy objective to diffuse digital technologies and services across all segmented of the society: the poor tend to be the group most sensitive to such taxes and fees.[51]

Another policy that is key for online sellers and buyers to transact is making digital signatures legally equivalent to hand-written signatures. Digital signatures can dramatically accelerate online transactions and make them more secure. For example, in Estonia, digital signatures have been the foundation for such e-services as registering a company online, e-banking, and e-voting. Digital signatures are among the technology solutions that help Estonians file taxes in five minutes.[52] Practically all countries analyzed here have accepted digital signatures as enforceable in courts. However, in some such as in El Salvador, digital signatures law has yet to be implemented; this is causing uncertainty among online sellers and the private sector in general as to which type of signature is legally binding.

Online payments

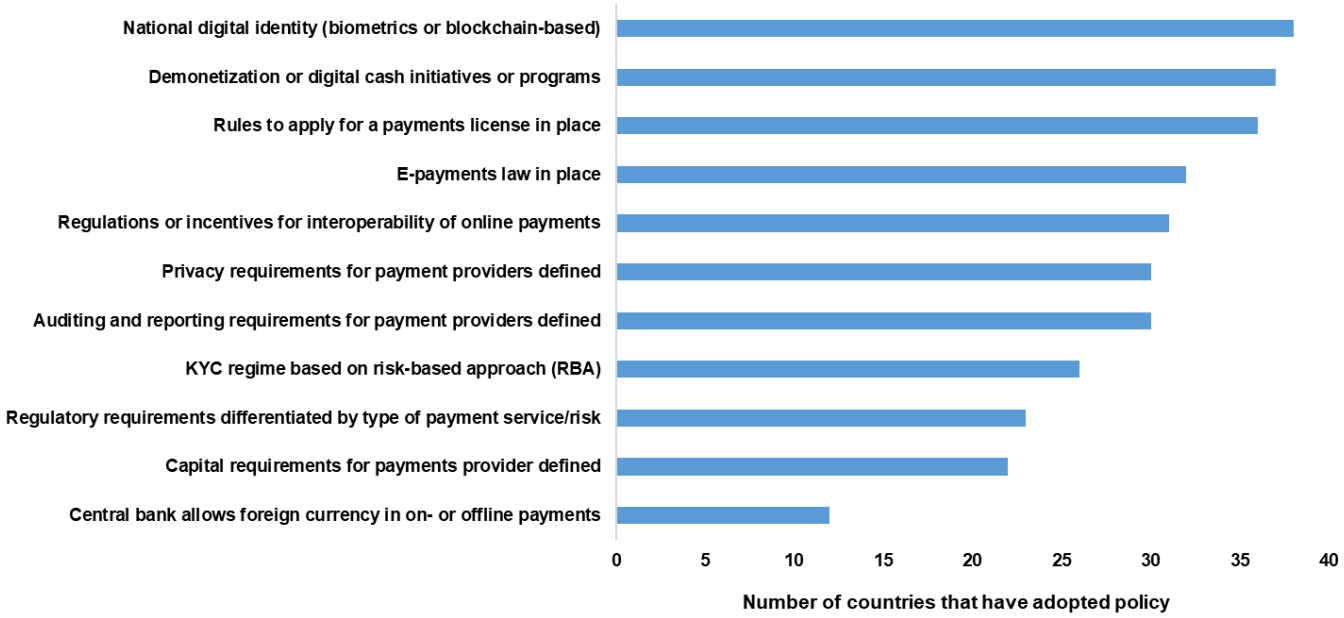
Electronic payment systems have proliferated around the world, enabling individuals and business to transact at lower cost. Online payments and their interoperability across borders is also found to be key for cross-border ecommerce – and expand countries' trade, SMEs' participation in trade, and creation of cross-border supply chains.[53] However, payments systems do not work optimally in cross-border commerce. Lack of affordable and reliable online payments to transact with foreign buyers and sellers is a leading barrier for SMEs to engage in cross-border ecommerce. Partly as a result of payments challenges, most small online sellers in developing countries are "Facebook merchants" that market their goods on social media platforms but do not send or receive payments online – and thus are harder-pressed to transact across borders with foreign buyers.

Positively, governments appreciate the importance of online payments; nearly all countries mapped here have introduced digital cash programs to expand online payments in their economies (figure 18). India has been particularly proactive in turning toward cashlessness through financial incentives and new government-sponsored apps that help entice Indians to transact electronically (case 5). In 31 of the mapped countries including India, there have been efforts to fuel interoperability of the many types of payments systems; however, only in some have there been very robust, concerted efforts by the private sector and regulators to propel the interoperability of online payments. Peru, Tanzania, and Brazil stand out in particular; analysts have attributed their success to the fact that interoperability was private sector-led and in the interest of the payments and banking industries, rather than imposed on them by the government (case 6).

As online solutions and payments grow more ubiquitous, concerns about security of online payments accentuate, and so does the need to better identify firms and individuals that are transacting. One game-changing solution that is already piloted is the use of biometric technology such as fingerprint scanning to identify users making payments. India's Aadhaar, the world's largest

digital, biometrics-based ID database, is fueling interoperable payments and financial inclusion to people without mobile devices. It is by court order voluntary: Indians can opt out if they have concerns about the security of their personal data. Some countries are experimenting with blockchain-based ID solutions. For example, the Financial Services Agency of Japan has been working on a new digital ID powered by blockchain technology to make banking more efficient for Japanese consumers – a possibly promising solution also for business clients.[54] A consumer with an account at one of the participating banks would use the blockchain-powered digital ID to access banking services at other banks involved in the program. Japan is researching similar technology for awarding government contracts.

FIGURE 15 - NUMBER OF COUNTRIES THAT HAVE ADOPTED PAYMENT REGULATIONS CONDUCIVE TO PLATFORM-ENABLED TRADE, BY AREA



Case 5: Overnight to Digital Cash? – India

India has made considerable and fast inroads in making its society cashless. According to a recent study, Indians' costs of accessing cash are among the highest in the world.[55] The costs tend to rise with size of population – but even controlling for population size, India stands out, faring especially poorly in terms of ATM access compared to such countries as Kenya, Nigeria, or Egypt. The problems amplified in small cities: one study found that residents of Delhi collectively spent 6 million hours and $1.5 million to obtain cash, while residents of Hyderabad spent twice as much on a per capital basis, or altogether 1.7 million hours and $500,000.[56]

In many advanced countries, digitization of payments has been pushed by industry that has agreed to waive users' processing fees. In 2018, India set out to reform, becoming the first nation to subsidize the use of digital cash such as eWallets, mobile banking, through 10 percent discounts on online payments for insurance policies, rail tickets and highway toll charges. The government also waives service tax on online transactions below 2,000 rupees and created a 0.75 percent discount for digital payments at gas stations. Government also got rid of 500 and 1,000-rupee notes. The demonetization drive prohibited form 80-90

percent of currency by November 2016. Digital transaction volumes grew 43 percent between November and December 2016.[57]

The results of the campaign were to many observers very significant. The volume of transactions doubled 2016–17 and was expected to grow from 32 percent in 2013–14 to 62 percent in 2017–18. The transactions at points of sale are expected to exceed transactions at ATMs by 2022, both in terms of volume and value.[58] Granted, most people did not digitize completely: a survey found that respondents who keep more than 2,000 rupees as minimum cash in hand is 29 percent in case of credit card users, as compared to 12 percent in case of cash-only users.[59] Mobile-based payment methods have taken off faster than debit and credit cards.

Non-cash payments surged immediately following the demonetization policy enacted in November 2016, when cash in circulation fell by two-thirds, driving hopes that the shock would kick-start India's transition to a cashless economy. By March 2017, digital transactions had increased by 33 percent by volume and 59 percent by value from November 2016.[60] The most notable surge in cashless payments was over infrastructure introduced over the past several years: the Immediate Mobile Payments System (IMPS) and United Payments Interface (UPI), which support instant payments using mobile phones and provide the infrastructure for new payment applications, and the government-sponsored Bharat Interface for Money (BHIM) app, which enables payment by anyone with a bank account and smartphone. The app connects to Aadhaar numbers, India's universal identification, opening opportunity for a payments network with hundreds of millions of new Aadhaar-enabled bank accounts.

The National Payments Corporation of India has launched BharatQR Code, an intermodal system for payments that eliminates the need for point-of-sale terminals in consumer transactions and enables customers to pay participating merchants by scanning a unique QR code with their smartphone camera, with no new technology required on the seller's end. The key in the system is interoperability: users can pay for goods or services using the new BHIM app, other UPI-enabled apps and mobile wallets, or debit and credit card accounts, and merchants only need to register with a bank to receive payments.

Low adoption of smartphones, still at less than 30 percent of the population, could constrain India's journey to cashlessness. India has however created a workaround, the so-called *99# system, which allows residents to make payments using SMS with their basic mobile phones. These payments have spiked since the demonetization campaign started. Ecommerce platforms have been enthusiastic, with Alibaba being an investor in Indian mobile wallet firm Paytm and Facebook's WhatsApp planning to launch its own digital payments service in India.

Case 6: Interoperable payments – Peru, Tanzania, and Brazil

Getting different payment products and systems to interoperate is a major priority for the development of domestic and cross-border ecommerce to ensure buyers and sellers can transact seamlessly even if they use different payment systems. Interoperability also helps promote competition among providers, reduce fixed costs on users, and enable economies of scale.

Peru has created a fully interoperable payments system based on voluntary participation by the private sector.[61] Peru's interoperable platform Billetera Movil (BIM) launched in 2016 resulted from a four-year collaborative effort coordinated by Peru's Bankers Association. BIM is interoperable among three telecoms and over 30 financial institutions. The existing network of about 30,000 bank branches are also

included in the BIM network. The rules of the game for BIM were set in the 2013 National Law for Electronic Money. Banks, service providers, telecommunications companies agreed to sign onto the system after it had the support of key government officials, the bank superintendent, and the Central Bank. Ericsson won the bid to develop the technical capabilities of the BIM platform and telecom operators Entel, Claro, and Movistar partnered to diffuse the platform nationwide.[62]

BIM initially enabled peer-to-peer payments, cash-in/cash-out and mobile top-ups and merchant payments. The low fees ($0.18 per transaction) were to help Peru's poor to participate. The fees went to Pagos Digitales Peruanos, the company established to oversee BIM.[63] Participating banks will only start getting a return on their investment from these products when cross-selling opportunities become available.

In its first four months of operation, BIM secured 120,000 users and is expected to scale to 5 million users by 2021.[64] By the second half of 2017, it had 400,000 users. The industry also expects the platform to help deliver to the unbanked other banking products, such as microcredit, micro-insurance and micro-savings. BIM has encouraged the Association of Banks of Paraguay to explore similar initiatives with the country's incumbent service provider Tigo Money. One significant challenge BIM has faced to date is the limited uptake in rural regions, which is attributed to banks' limited engagement in rural areas ad prioritization of their urban clientele.

Like Peru, Tanzania has enhanced interoperability of payments through an industry-led drive.[65] The standards that supported interoperability and the technical switches among the systems were developed first by the telecom industry. The process of setting standards involved regular meetings to define participation criteria, clearing and settlement principles, handling of disputes, principles for intra-party compensation (or interchange) and interparty risk. Tigo, Airtel, Zantel, Vodacom were first-movers, interconnecting via bilateral APIs. There were no regulatory mandated; industry participated voluntarily. The central bank however provided rules for consumer protection, risk management, and contacts with regulators. There were also workshops and training sessions to ensure the stakeholders, operators and banks were working toward a common goal. In May 2014, the participants agreed to create a use case – define rules for wallet to wallet transfers. [66] The final agreement on the system was attained in September 2014.

Brazil has pursued a similar approach. In 2013, the government issued regulations for the mobile market and endorsed, but did not mandate, interoperability among payment providers. Each provider was requested to outline how it intended to integrate into the financial system. Various partnerships emerged spontaneously, such as in 2013 between Zuum, Vivo, and MasterCard and between Meu Dinheiro with Claro and Badesco; and in 2018 between MasterCard, TIM, leader in the prepaid market, and Caixa, a Brazilian bank and the second largest government-owned financial institution in Latin America.[67]

Interoperability of cross-border payments is typically harder to accomplish because operators often want to hold on to their share in a given market, and because of each country's government and central bank

needs to be engaged and supportive of interoperability for it to happen. One good example is the 2018 agreement among some of the largest telecommunications companies in Africa, Vodafone Group and MTN Group, to allow their respective customers to make mobile payments across their networks, including across borders between Vodafone subscribers in Kenya, the Democratic Republic of the Congo and Tanzania, and MTN users in Uganda, Rwanda, South Sudan and Zambia.[68] The goal was to fuel remittance payments in the region; the value proposition was very strong for users in that the partnership cut fees for cross-border transfers from 20 percent to 3 percent or less. Critically, the participating countries' central banks approved cross-border fund transfers. Both companies have since formed further partnerships. For example, MTN has created a pilot partnership with Airtel Burkina Faso, to facilitate payments between Burkina Faso and Ivory Coast.

Countries' regulations for online payments are becoming more sophisticated, but much still needs to be done. Three-quarters of the mapped countries have established electronic payment laws that define regulatory requirements and contractual issues related to e-payments; poorer countries have recently made great strides in this area. For example, in 2017, Laos passed the National Payment System (NPS) Law aimed to provide clarity to industry, create a payments department within the central bank to issue licensing to both payment service providers and payment system operators, and pave the way to attract innovative and affordable payment solutions to the country. The Central Bank of Myanmar recently removed restrictions on the participation of international payments companies in Myanmar's domestic payments industry, a move widely applauded by global financial services.[69] Positively, 36 countries have put in place a clear set of procedures for payment providers to seek payment licenses. However, only some explicitly allow the use of foreign currency in e-transactions, for facilitating cross-border payments. Ghana and Tanzania, for example, mandate these transactions be made only in local currency.

The tightening of anti-money laundering (AML) and know your customer (KYC) rules has made it harder for small firms to use banking services and electronic payments. KYC laws can be prescriptive and result in box-checking exercises for financial institutions that are vetting potential customers. This provides little room for adjusting controls to high-risk and low-risk customers; thus low-risk customers that merit bank accounts experience delays, and due diligence resources are not optimally targeted at high-risk customers. The aim of a risk-based approach (RBA) in KYC is to make controls more pragmatic and commensurate with risks. RBA was first proposed by the inter-governmental Financial Action Task Force on Money Laundering (FATF), and a number of countries have revised their AML laws to be in line with FATF recommendations.[70] 26 countries have in place some type of risk-based approach.

Ecommerce logistics and trade facilitation

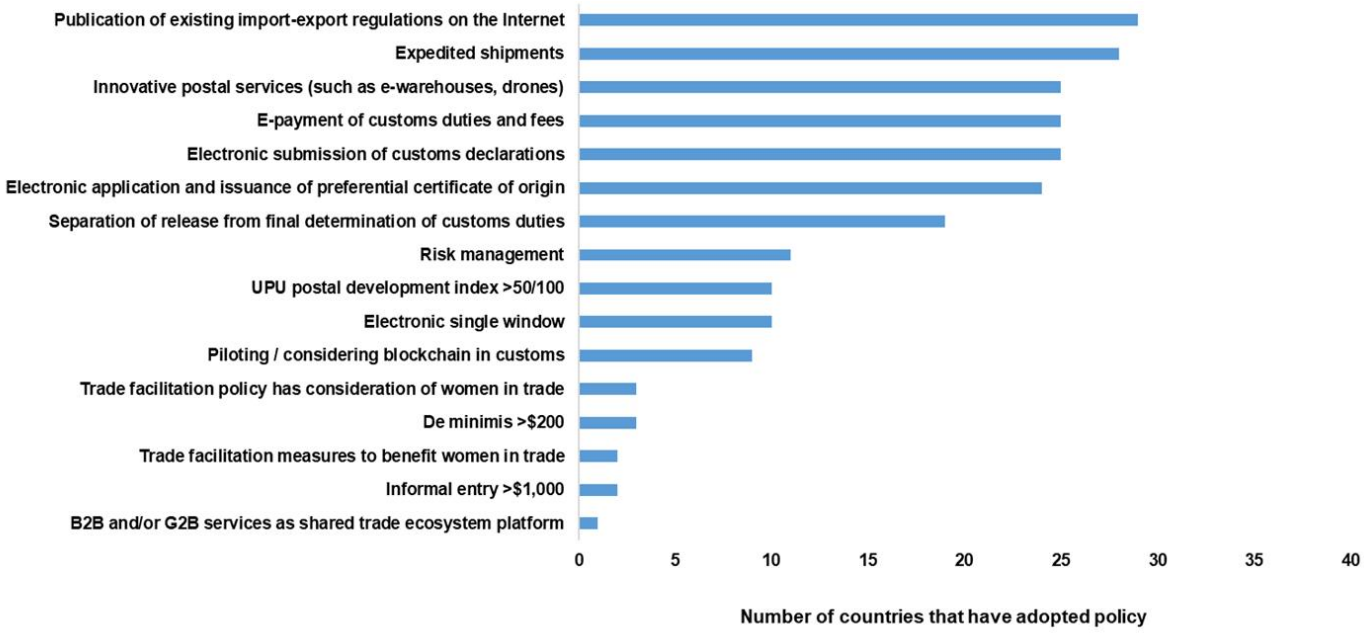
The quality of ecommerce logistics, ease of trade compliance, efficiency of postal and logistics services, and customs clearance times are extremely important for SMEs' participation in cross-border ecommerce, given buyers' growing demands for fast and reliable delivery. Surveys indicate that logistics is also the main bottleneck to ecommerce in developing countries. SMEs struggle in domestic ecommerce with rural last-mile delivery and quality of postal services; in cross-border ecommerce, the main challenges are total cost of delivery to the end consumer and arcane customs procedures. [71]

To be sure, governments have made a great deal of progress in recent years on trade facilitation, including by signing and moving toward the implementation of the Global Trade Facilitation Agreement (TFA) that streamlines customs procedures and border clearance especially in developing economies. Some TFA commitments, such as for expedited clearance, online payment of duties, and availability of customs information online are especially relevant for ecommerce sellers accustomed to doing their business online. About 60 percent of the countries mapped here have adopted these measures (figure 16). Such measures can be very impactful in combatting graft and expanding trade. Digitizing customs clearance is found to reduce border compliance time for imports on average from 110 hours to 37 hours, and significantly reduce corruption in customs.[72] Trade flows grow as a result of such reforms: firm-level data from Uruguay shows that if all shipments subject to physical inspection cleared customs within a day, exports would increase by almost 6 percent.[73]

Single window systems that enable SMEs to deposit electronically all documents related to border clearance in one single place are another means to reducing SMEs' trade compliance costs. For example, OECD has found that single windows can lower trade costs by 14.5 percent in low-income countries.[74] Out of 40 countries mapped, 10 have adopted electronic single windows, per data from

the United Nations. At the start of 2018, Singapore took its single window to the next level by introducing a National Trade Platform with a gamut of B2B and G2B services to help SMEs engage in trade, such as to get access to low-cost logistics and trade finance. Developers can build new trade-related services directly on the platform.

FIGURE 16 - NUMBER OF COUNTRIES THAT HAVE ADOPTED ECOMMERCE LOGISTICS AND TRADE POLICIES CONDUCIVE TO PLATFORM-ENABLED TRADE, BY AREA



Customs around the world have been concerned about small parcels shipped by small businesses, given customs' lack of visibility into the contents of these parcels and often limited paper trail on the SMEs that sent them. The optimal solution is not, however, to saddle small businesses with onerous paperwork or open and inspect every parcel that enters a country. Rather, the key is risk-targeting that enables both trade facilitation and customs security.[75] Risk-targeting based on big data, predictive analytics, and machine learning can help customs identify illicit shipments and fraudulent transactions aimed to avoid duties, while accelerating customs clearance of legitimate trade.

Singapore and UK have pioneered in the use of predictive analytics in customs in order to quickly identify fraudulent customs declarations and accelerate clearance of licit shipments. Especially usefully, UK, South Korea and Peru have been piloting blockchain in customs. Blockchain's properties appear terrific for border clearance, both to ensure high-quality, real-time data on shippers and on the authenticity and origin of goods, and to provide all border agencies have access to the same data on the same shipment in real-time. In January 2018, 18 countries in East Africa seized on these opportunities, announcing a "Digital FTA", a web of blockchain ledgers and enables easy generation of certificates of origin.[76]

Logistics costs do not end at the border. For example, parcel delivery costs can be much higher for a rural company than an urban one in the same country, given that the "drop density" in rural areas is much lower – after all, shippers' scale economies are much less if they deliver, say, ten parcels in an hour to one urban neighborhood than when they deliver two parcels over a trip of five hours to a remote rural area. The differences in scale economies in shipping penalize rural buyers and sellers simply for being rural.

In the dataset, 25 countries have pursued innovative ecommerce services in their postal systems, such as piloting drone delivery, parcel lockers, and self-service kiosks, and automated ecommerce fulfillment centers. Such innovative ecommerce services have not only fueled ecommerce; they have become the core business and growth driver for postal services in countries such as Singapore (case 7).[77] Often posts' turn to ecommerce is motivated precisely by the realization that ecommerce can be a revenue driver at a time when letter mail business withers. At the same time, in Universal Postal Union's (UPU) ranking, which considers postal operation efficiency, internationalization of postal services, competitiveness in all main markets, and adaptability of posts' businesses models, most Africa, Latin America and Caribbean, and Middle Eastern countries score well below 50 on a 0-100 scale. According to the UPU, a country can fully realize the benefits of ecommerce only by addressing all four dimensions of measurement.

Case 7: Upgrading postal systems for ecommerce – Singapore

In a survey of 24,333 consumers in 24 countries, the post accounted for 72 percent of most recent cross-border deliveries, while 16 percent of deliveries were with other carriers and 13 percent of consumers did not know who delivered their parcel.[78] The efficiency and quality of postal services, essential for ecommerce markets to grow, are still limited in developing countries. Singapore Post Limited ("SingPost"), a company started by the government but by now listed in the stock exchange, has been a frontrunner in reimagining postal services for the ecommerce era, and building itself into a hub for ecommerce shipments across Asia. In 2003, SingPost began implementing a series of corporate restructuring measures and customer offerings with the aim to generate more revenue for financing future development.[79] Facing flattening revenues in 2008-09 and trends of "e-substitution", lifestyle changes, and technology adoption in Singapore,[80] SingPost decided to upgrade its technology systems and ecommerce logistics capabilities. It acquired a logistics company, Quantium Solutions, which enabled it to grow its regional footprint, and to concentrate greater regional growth in vPOST, an online shopping and shipping service.

SingPost has since been working to become a technology-driven ecommerce logistics solution that serves as a "one-stop, full service, end-to-end ecommerce logistics solution to brands and retailers" that want to export or tranship via Singapore to other markets in the Asia-Pacific.[81] Its eCommerce logistics network now spans 19 markets across Asia Pacific, Europe and the United States.

The centerpiece of SingPost's ecommerce business is the Regional eCommerce Logistics Hub opened in 2016, which is a $180 million, three-story, 553,000 square feet (equal to ten soccer fields) facility housing a fully automated parcel sorting facility able to handle up to 100,000 parcels a day, and end-to-end sorting, shipping and returns management capabilities that enable quicker order fulfilment.[82] SingPost built the facility in collaboration with brand owners and last-mile fulfilment players. The facility's two major value propositions are automation of the sorting system and warehouse; and efficient fulfillment of cross-border shipments to destinations worldwide.

To accommodate ecommerce shoppers requiring speed and convenience, SingPost has also built a network of Self-service Automated Machines (SAMs) that enable people to drop off their registered parcels or mail rather than waiting in lines.[83] In unmanned smart post offices, users can get hold of postal staff via video conferencing.[84] SingPost has also created POPStations where customers can pick up their parcels, using their mobile or fingerprint as identification.[85] Such parcel lockers have expanded also across Europe; the growth of parcel lockers is seen as the key behind Eastern Europe's cross-border ecommerce. Deutsche Post DHL has used them since 2002 and there are now more than 5 million registered users.[86] SingPost is also bringing to market Smart Post Offices, smaller, automated facilities that cater to the younger segments of the population.

SingPost has also brought together retailers, brands, logistics companies to develop new retail and logistics solutions.[87] For example, consumer goods company Unilever has created with SingPost a virtual kitchen for consumers to try out different products through an augmented reality headset.[88] Another experiment is the FairPrice@SingPost mobile app, a future supermarket where smart lighting in the store connects to a shopper's mobile app that then guides the shopper to the items he or she needs.[89]

With the support from the Singaporean government's Economic Development Board, SingPost has also launched a Centre of Innovation set up to research new logistics and postal services and products, and is working to position SingPost to lead in such areas as driverless cars and sharing economy.[90] SingPost has also tested drones, uniquely integrating in its drones an authentication system and an app for recipients to ensure that they got the package and to select their preferred delivery date and time.

SingPost reported very strong, 171 percent revenue growth in its ecommerce operations 2016-17, much above 1.5-1.7 percent growth rates in its postal services and other logistics businesses.[91] SingPost's ecommerce capabilities have enticed leading platforms to invest in Singapore. For example, ecommerce portal Lazada Singapore owned by Alibaba moved its warehouse operations to SingPost Regional eCommerce Logistics Hub to better service its Southeast Asia client base. SingPost and Lazada are working on a "click and collect" service whereby shoppers can collect or return their online purchases.[92] It has also enabled customers expand their online footprint through a marketplace program that helps propel sales on channels such as Amazon, Sears, and Walmart.[93]

Trade policy can also be used to lower ecommerce logistics costs. An array of studies indicate that reforms to facilitate trade in low-value items through increasing *de minimis* levels is a "silver bullet" for improving trade and economic growth. Higher *de minimis* rates accelerate customs clearance, increase consumer welfare, lower costs for SMEs to secure inputs from around the world, and typically increase government revenue and trade in low-value items, the hallmark of platform-enabled trade.[94] Higher *de minimis* levels also ease ecommerce returns from foreign buyers of domestic goods. Both the United States and the Philippines have significantly increased their *de minimis* levels in 2016 to tap these gains. However, in the dataset, only three countries have *de minimis* levels above $200, the benchmark recommended by the International Chamber of Commerce.

Ecommerce export promotion for SMEs

Particularly small non-exporter firms in developing countries point to their capabilities to export as an impediment to starting to sell online and selling across borders.[95] Export promotion policies are meanwhile widely found to increase trade. For example, one study found that a dollar spent on export promotion generates $18 of exports.[96] There is some evidence that export promotion focused on new exporters rather than occasional or experienced exporters generates higher returns. Export promotion agencies that provide bundled services (such as consulting and trade missions) tend to perform best.[97] Case studies suggest that successful ecommerce export promotion may also require multifaceted approaches, such as one-on-one training, financial support, and training by ecommerce platforms.

Most countries mapped in their study have an export promotion agency, and in 25 counties that agency has been offering some types of training programs for companies to use ecommerce as a means to export. For example, PromPeru-sponsored "PYME Peruanas al Mundo" (Peruvian SMEs to the World) is a full-scale training and information portal for Peruvian SMEs that want to export or import using ecommerce. The online courses are extensive, covering such topics as use of platforms, marketing, and other areas; PYME Peruanas al Mundo also has seminars in various Peruvian cities.

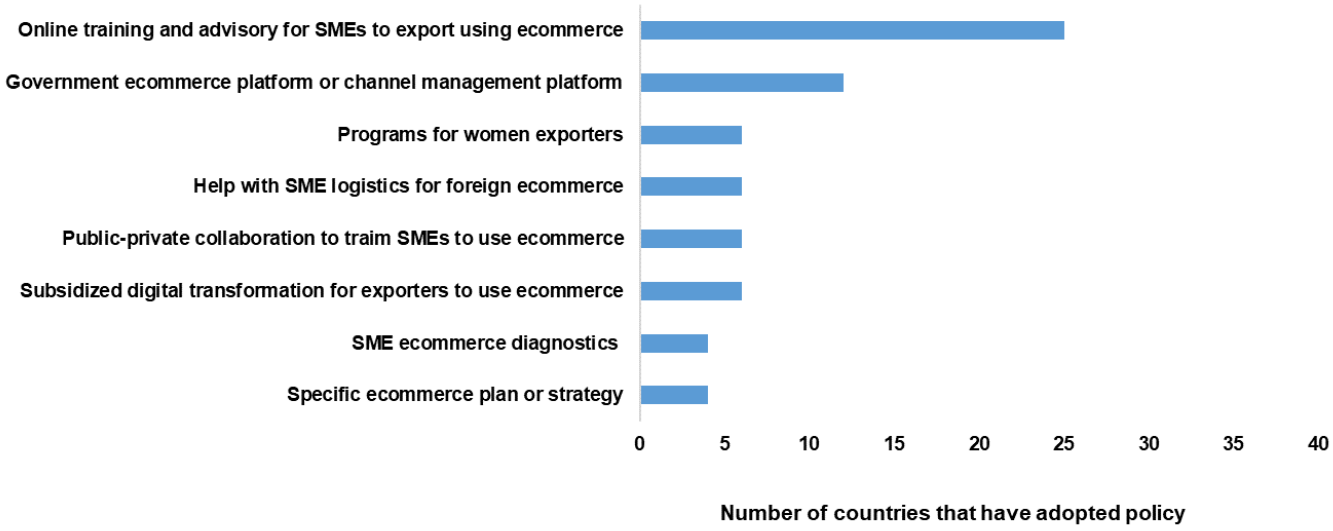
Peru has also created strategic partnerships with DHL and various digital and content service providers to help SMEs engage in trade.

In Mexico, ProMéxico has program "Mexico Exports in One Click" ("México Exporta EnUnClick"), whereby ProMéxico helps Mexican companies access 130 million international buyers making $300 billion in cross-border purchases during 2018. The program is multifaceted, consisting of platform partnerships with Alibaba, Amazon, and eBay, discounts and incentives offered by service providers such as UPS, digital transformation projects for existing exporters to export online, and seminars and workshops for SMEs to learn to sell online.

Several other countries have partnered with one of the major ecommerce platforms such as eBay, Alibaba, or Rakuten to train SMEs to do ecommerce and use these platforms. For example, in 2018, Rakuten Belanja Online, the local affiliate of Japanese e-commerce giant Rakuten, started offering ecommerce courses to Indonesia's SMEs. Alibaba has also been very active in forming public-private partnerships.

In 12 of the 40 countries mapped here, export promotion agencies have mounted their own ecommerce platforms or established programs to help SMEs readily onboard global platforms (figure 17). For example, Korean export promotion agency KOTRA has website buyKOREA.org, a B2B e-market place which connects international buyers and Korean suppliers. It enables product search, online transactions, EMS shipping, and online video meetings and buying offers. Buyers can see new Korean products which are registered daily and pay by credit cards easily. The Korean government supports online sellers also by operating overseas logistics centers in 22 locations in 12 countries. Korea Trade Investment Promotion Agency helps SMEs with customs clearance, inventory management and cargo collection. Real-time shipping status is available in buyKOREA.

FIGURE 17 - NUMBER OF COUNTRIES THAT HAVE ADOPTED ECOMMERCE EXPORT PROMOTION PRACTICES CONDUCIVE TO PLATFORM-ENABLED TRADE, BY AREA



Instead of building their own platforms – an effort that takes considerable resources – some export promotion agencies enable SMEs to sell on large, global platforms. For example, UK Department for International Trade's E-Exporting Program has a tool for UK SMEs to identify their ideal platform and gain preferential rates to use a platform to export. In Costa Rica, export promotion agency Procomer has an alliance with Alibaba, i-Gourmet, and Amazon that offer Costa Rican SMEs discounts for using their services. Pro Ecuador has an innovative EcuadorExquisito campaign where Ecuadorian food and cooking is been webstreamed to Chinese shoppers on Tmall. Pro Ecuador has also run a campaign to promote online sales of Ecuadorian mangos in China. These recently gained access to the Chinese market, after 13 years of negotiations between the two countries.

Six countries mapped here have also provided financial incentives for exporters to build their digital capabilities and start using ecommerce to export. This is useful in that the target companies have already overcome the challenges related to exporting, and can focus on using ecommerce and platforms to expand their exports. For example, Malaysia External Trade Development Corporation (MATRADE) has an eTrade program to promote exporter SMEs' use of various ecommerce platforms, such as Alibaba, JD, TMall, Amazon, eBay and Daganghalal. SMEs can get RM5,000 (about $1,300) to cover listing and marketing fees, as well as costs of translation and Amazon fulfilment fees. Between October 2014 and May 2017, 955 companies joined the eTRADE Program.[98]

Seven of the mapped countries have special programs for women exporters, though these are not specific to ecommerce. For example, ProChile has a program Mujer Exporta that aims to help women's companies to export. The program offered training during 2017 via several regional workshops in Chilean cities.

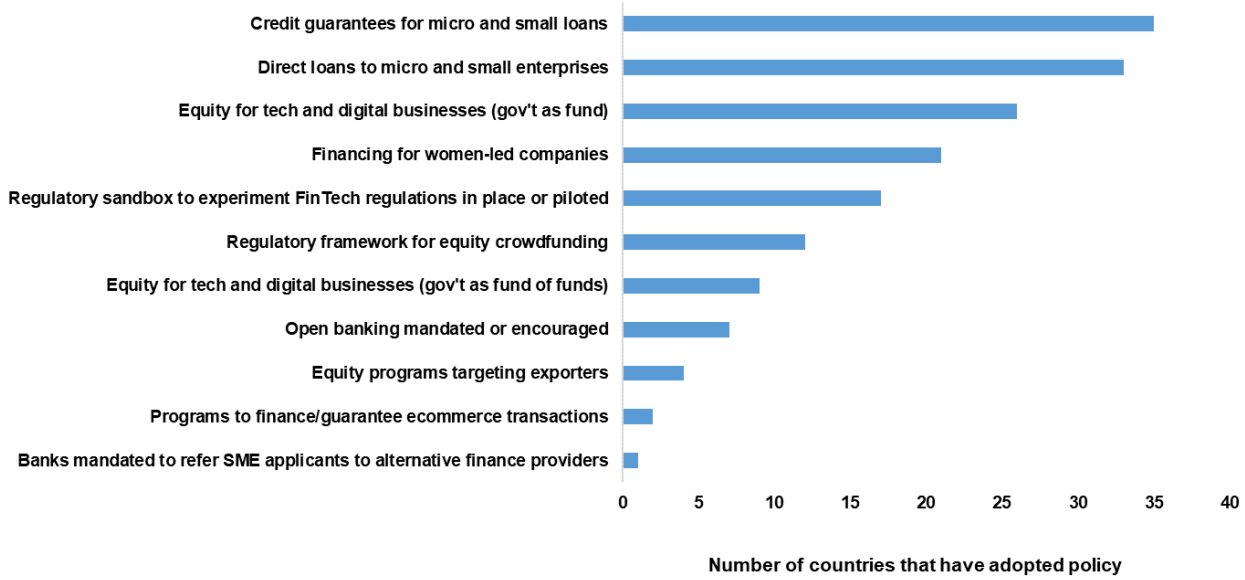
SME finance

Access to capital – from working capital to early-stage financing and trade finance – is in surveys found to be a key constraint for SMEs to engage in trade and use platforms to export.[99] Practically all governments have sought to expand SME finance in recent years. The staple product is a government guarantee on a bank loan to an SME, aimed to reduce banks' risks of lending to SMEs. Of the mapped countries, 35 countries have conventional government credit guarantee programs in

place, and 33 offer some form of direct loan to SMEs (figure 18). Empirically, these programs have a mixed record. However, banks in general regard guarantee schemes as the most effective government program to support SME financing in developed and developing countries. Some schemes such as Chile's Fondo de Garantía para Pequeños Empresarios (FOGAPE) and French Oséo's guarantee scheme have been found to be very effective in expanding SME credit and SME growth.[100]

Often government guarantees and loans have helped expand SME lending during cyclical economic shocks that tend to hit SMEs harder than large firms.[101] Loan guarantees have also been found to have additionality – they have helped companies obtain additional loans and loans on better terms than these firms would otherwise get, rather than substituting for loans that would anyway have been made. It is however not clear whether guarantee schemes expand funding on the "extensive margin", to firms that might otherwise not get a loan at all.[102]

FIGURE 18 - NUMBER OF COUNTRIES THAT HAVE ADOPTED SME FINANCE PRACTICES CONDUCIVE TO PLATFORM-ENABLED TRADE, BY AREA



Governments around the world are showing growing interest also in early-stage financing in order to nurture tech start-ups. This is also positive for platform sellers that are early in their life cycles. 26 of the mapped countries have a government equity fund that invests directly in SMEs. For example, in 2016, the Thai Government launched a $570 million venture fund for Thai start-ups.[103] The Ministry of ICT also stated it would establish a $285 million Digital Economy Fund targeting technology ventures.

Granted, the idea that government should "pick winners" among private companies is controversial – and evidence of the performance of companies backed by government venture capital funds is mixed. Studies suggest that government-backed funds do not have particularly good results. However, syndicates involving governments and private investors do outperform purely privately managed funds. [104] Evidence also suggests that governments may best support early-stage funding by acting as limited partners (that is, as funds of funds) that invest in privately managed funds with professional venture capitalists that in turn invest in companies – nine countries in the sample have adopted this strategy.[105]

Notably, 21 countries have created specific financing programs for women entrepreneurs. Such programs are typically formed to overcome what empirical literature suggests are gender biases among lenders and investors.[106] Research on the role of the government in expanding lending to and investments in women-run businesses is still scant; however, it appears that government could help incentivize lenders and investors back women, or possibly finance women-led firms directly. In Canada, Business Development Canada's Women in Technology Fund seeks to foster the creation of the next generation of millionaire Canadian women technology entrepreneurs. With $70 million to be invested over five years, it is the largest venture capital fund in North America dedicated solely to investing in early-stage women-led technology companies across sectors. As part of the program, $60 million are dedicated to direct investments in women-led tech firms in seed stage, Series A stage and sometimes in the Series B stage, alongside accelerator partners, investors and other corporate venture partners where Business Development Canada forms part of a syndicate or is a lead investor. Also Mexico has a program whereby micro, small, and medium-sized enterprises with at least a 51 percent female ownership are eligible for loans from 50,000 to 5 million pesos (or up to about $500,000) with 12-13 percent interest for five years.[107]

Some countries have created ecommerce-specific funding mechanisms. Korea has creative, ecommerce-specific credit guarantees to promote e-commerce transactions. The loan guarantee is a service to guarantee loans that ecommerce buyers might get from a financial institution. Banks transmit information to The Korean Credit Guarantee Fund (KODIT) for buyers to apply for the guarantee, and KODIT conducts credit investigation and issues the e-guarantee. China has a similar scheme in place.

There are several initiatives around the world to establish the appropriate regulatory frameworks to ensure SMEs' access to finance. The quickly spreading practice of "open banking" – data-sharing between banks and other financial service providers such as payment providers and online lenders through APIs or shared data platforms – is expected to expand SMEs' access to fast-disbursing loans. The European Union has been particularly proactive, driving open banking through the updated version of the Payment Services Directive 2 (PSD2). McKinsey suggests that open banking is conducive to loan underwriting and risk analysis of "thin file", small and nascent borrowers.[108]

Open banking practices are applied in many countries by the private sector and large banks. Of the 40 mapped countries, seven mandate or actively encourage open banking, and a number of others such as Singapore have promoted and recommended it to the country's financial services community. Some have sought to establish standards for open banking. In Malaysia, the Central Bank is aiming to create an Open API Implementation Group with members drawn from the Central Bank, financial industry, fintech companies and relevant key stakeholders, with the goals of developing Open API standards, including open data specifications, security standards, and oversight arrangements for access by third party service providers.[109]

The UK has been very active in creating new ways to fuel SME finance (case 8). For example, the UK has pioneered in lowering FinTechs' time and money to market to with the regulatory sandbox approach, whereby companies can bring to market a new financial product or service without needing to meet all applicable regulations. The approach is found to help energize financial services and innovation. The sandbox approach is spreading fast – 17 countries especially in Asia-Pacific have adopted it or are considering it, and Mexico adopted it as part of its new FinTech law. Some countries also see the sandbox approach as improving financial inclusion.[110]

Case 8: UK's pioneering programs to boost finance for SMEs in the digital era

The UK has pioneered high-impact SME finance practices, including online lending and open banking. In 2014, the UK enacted a law that required large lenders to refer to alternative and smaller lenders SMEs whose credit applications have been rejected. The motivation was banks' decreased interest after the financial crisis to lend to SMEs. Mandated to perform more extensive due diligence on borrowers, banks saw their fixed costs of loan approvals rise, which incentivized them to work on larger loans and with well-known borrowers. Yet still most UK SMEs only approached their main bank for finance, and over a third gave up completely if their application was turned down, rather than shopping the application around. The law was to make banks to encourage SMEs to look elsewhere for funding. The sharing of the financing information – which, in addition to loans, covers factoring, asset-based lending and trade finance – occurs via online referral portals that help match the rejected SMEs to alternative lenders.

Banks in UK and European Union are also today required to share proprietary data, in a regulated and secure way, under the U.K.'s Open Banking Standard and Europe's Payment Services Directive 2. In 2018, the UK government set out to accelerate Open Banking by mandating that banks that hold a data on their SME customers' financials and other business vitals share that information, if permitted by the SME, with non-bank lenders analyzing the SME's creditworthiness. Granted, banks also benefit as SME borrowers' data is fully portable. For example, a borrower can ask an ecommerce platform for data on the borrowers' sales on the platform and pass that data to a bank, for the bank to use in its credit analysis. By virtue of these new mandates, European SMEs in essence become controllers and carriers of their data. This should encourage new lenders, faster credit decisions, and fewer defaults.

The UK has also lowered FinTechs' time and money to bring their offering to market with the "sandbox" approach, whereby companies can bring to market a new financial product or service for a period without securing all regulatory approvals that would ordinarily be required. UK has also worked to solve another critical problem: the fact that each country has its own financial services regulations that do not interoperate well, which forces FinTechs that are scaling across markets to adopt rules and apply for licenses specific to each new market. For example, in February 2017, UK's Financial Conduct Authority (FCA) and the Ontario Securities Commission of Canada signed an agreement to refer to one another innovative businesses seeking to enter the other's market and help them navigate regulations and lower time to market.[111] The deal is hailed as a template for cross-border regulatory collaboration in the FinTech market. For its part, the Ontario Securities Commission of Canada had earlier concluded a similar deal with the Australian Securities and Investments Commission.[112]

A dozen governments in the dataset have promoted equity crowdfunding, where companies seek financing through online platforms from accredited investors. Equity crowdfunding has opened financing to companies that may not have extensive investor networks or that are run by women or minorities. Legislation and regulatory oversight are viewed as important for promoting the crowdfunding market, such as by keeping the costs of securities issuance reasonable and by lowering the incidence of fraudulent practices.[113] Most advanced countries have enacted equity crowdfunding laws and Latin American and Asian economies are considering such laws. Brazil has been a Latin American frontrunner; in August 2017, Brazil's Commissão de Valores Mobiláros (CVM) created a new exemption for issuers of securities to raise funding on platforms that have been approved by CVM. Issuers may raise up to BRL 5 million (about $1.5 million) under the exemption within 180 days. Most African countries have yet to develop or pass crowdfunding laws.

B. PRELIMINARY LOOK AT IMPACT OF POLICIES ON PLATFORM-ENABLED TRADE

Countries with policies conducive to platform-enabled trade also have more platform-enabled trade and more sellers selling on platforms than countries that have fewer good policies in place. To what extent and which policies actually drive and *cause* platform-enabled trade?

This section explores these questions through a preliminary econometric analysis. Since the volume of platform sales appears to grow in lockstep with the number of sellers, the key for countries to grow their platform-enabled trade volumes is growing the number of platform sellers – at least at first, before focusing on growing the sales of promising sellers. To explore causal relationships between policies and the number of platform sellers, we regress the number of platform sellers in 65 countries over five years on variables that capture different policy dimensions mapped in this report, such as broadband connectivity, logistics quality, and tax policy.

We cannot use our policy index as an independent variable because it is from 2018 while data on platform sellers are from 2011-15. Rather, we employ proxy variables that capture different dimensions of the policies mapped above and that are available for earlier years – fixed broadband usage, ICT export levels (as a proxy for the sophistication of ICT service ecosystem and ICT skills), and liner shipping quality (as a proxy for logistics cost and quality), all from World Bank's Development Indicators. Since larger economies tend to have more sellers, we control for the size of economy; GDP data are also from the World Development Indicators.

Table 2 shows the results. The number of platform sellers, after controlling for the size of the economy, is significantly shaped by broadband connectivity, ICT readiness and skills, and quality of international logistics. Though not significant, trade openness enters with a positive sign. These results suggest that policies conducive to better Internet connectivity, digital services ecosystem, and cross-border logistics are essential for platform-enabled trade to flow.

TABLE 2 - RELATIONSHIP BETWEEN POLICY VARIABLES AND PLATFORM-ENABLED TRADE

Dependent variable: Number of platform sellers			
Independent Variables			
Log of GDP	0.99 (17.58)***	0.926 (18.29)***	0.817 (8.13)***
Fixed broadband penetration		0.355 (9.66)***	0.297 (6.33)***
ICT services			0.206 (4.10)***
Liner shipping quality			0.006 (3.22)***
Openess to trade			0.108 (1.19)
Observations	325	325	245
R-squared	0.49	0.6	0.62

This is a pioneering attempt to capture the policy drivers of platform-enabled trade. However, there are a few limitations for making causal inferences:

- It is plausible that the analysis has an endogeneity problem – namely that countries with a great deal of platform-enabled trade are likelier to enact policies related to ecommerce than are countries where ecommerce is only starting. In other words, while adoption of good policies may increase platform-enabled trade, increase in platform-enabled trade may induce countries to adopt good policies to begin with.

- The analysis here omits several variables that likely impact a country's success in platform-enabled trade, especially in platform exports, such as the policies of the country's trading partners. Our dataset on platform transactions does not define countries' export markets, however.

- Further data runs with policies mapped here (such as specific digital regulations, SME ecommerce export promotion programs, or payments laws) can reveal additional patterns. It will be possible to better establish how policies mapped in the above sections (for 2018) are related to transactions with future transactions-level data (for example for 2019-20).

VI. SUMMARY OF FINDINGS AND POLICY ROADMAP

This study has aimed to improve developing countries' knowledge of the state of platform-enabled trade and SMEs' use of platforms for trade in their economies, and the potential for different types of policies to increase this usage. We have reached the following results:

- **Platforms are an increasingly significant enabler of SME trade in goods and services in developing countries, in particular.** Developing country sellers use global platforms almost exclusively to export. In most developing economies, platform-enabled exports are growing much faster than overall trade and GDP. Platform-enabled trade also appears to be the core business for developing country sellers that are using global platforms: their annual sales volumes on platforms are as sizable as those of advanced country sellers. Yet SMEs' use of platforms is still very low in developing countries – less than 10 percent of the level of platform usage in the UK, for example. This suggests that better policies, programs, and incentives are needed to bolster developing country SMEs' access to and use of platforms for trade.

- **Most countries have adopted what might be called "low-hanging fruit" policies conducive to platform-enabled trade, but many impactful and positive policies have yet to be widely adopted.** For example, yet to be adopted at scale are safe harbors that provide immunity for internet intermediaries from user-generated content, online dispute resolution systems that are shown to significantly accelerate dispute resolution and build consumers' trust in trade on platforms, equity crowdfunding laws that help stimulate start-up finance, and export promotion practices that enable SMEs to bolster their digital readiness and learn to use major global platforms to trade.

- **There is a significant amount of positive innovation and experimentation in policy areas conducive to platform-enabled trade**. The study reveals numerous exciting policy innovations in both advanced and developing countries. For example, Singapore and Canada have developed extensive new postal services to promote ecommerce in their economies and cross-border trade; many Latin American economies such as Peru, Mexico, Brazil, and Costa Rica, along with Thailand and Malaysia, have built creative online programs, public-private partnerships, and digital transformation initiatives to help SMEs use platforms to export; and Korea, UK, and several East African economies have made significant inroads into adopting blockchain in customs, to facilitate the identification of high-risk shipments and clearance of low-risk ones. India, Peru, and Tanzania have made significant progress on promoting the use and interoperability of digital payments; UK has introduced several ground-breaking SME finance policies, such as open banking and FinTech sandboxes; and Brazil has created a renowned safe harbor for internet intermediaries.

- **The policy index for platform-enabled trade developed in this report is strongly correlated with countries' development levels, but there are also several frontrunners that outperform.** Overall, advanced countries and selected East Asian and Latin American economic have adopted about 65-75 percent of the policies mapped, while less developed countries in Africa, South Asia, Southeast Asia, and Latin America have adopted only 20-35 percent of these policies and practices.

- **Policies that improve broadband connectivity, the quality of ICT skills and services, cross-border logistics, and the ease for SMEs to comply with regulations are positively associated with the growth of the number of platform sellers**. The volume of export sales made on platforms appears to grow in lockstep with the number of sellers in a country, which suggest that the key for developing countries to grow their platform-enabled trade is to birth new platform sellers. Econometric results suggest that the number of platform sellers is significantly shaped by broadband connectivity, ICT skills and services, and quality of international logistics. Future data on platform sales is required to establish causality between the policy variables mapped here and platform-enabled trade. However, early statistical work, albeit with a limited sample, suggests that the policy index for platform-enabled trade developed here could be a good predictor of platform-enabled trade volumes.

How can developing countries improve their enabling environments for platform-enabled trade? The policy areas mapped here, along with the policies and practices in countries around the world, should provide a starting point. The policy mapping suggests that there are two main types of countries: countries that are at the start of their journey to take advantage of the opportunities platforms offer for their SMEs and that still have only some of the essential policies and practices in place; and countries where platform-enabled trade has taken off and whose policies also tend to be more encompassing.

The first set of countries tend to be low-income countries in Africa, South Asia, and parts of Southeast Asia and Central America. These economies still need work on the basic digital infrastructures such as diffusion of 4G networks and ICT skills across the society; ease of doing business online, including digital business registration, online lending, and e-filing of customs paperwork; postal ecommerce logistics; and export promotion and SME credit systems conducive to ecommerce.

These economies should consider rolling out 5G networks, furthering cashlessness and interoperability of online payments, removing tariffs on ICT products, and digitizing customs operations further, including considering the use of blockchain in customs, as done in East Africa. Critically, these economies need to provide more legal certainty for platforms and online buyers and sellers through the establishment of safe harbors for internet intermediaries, rules that enable cross-border data flows, and enforcement of balanced and robust consumer protection laws.

Some excellent examples for these economies might be Malaysia that has quickly transformed itself into a digital economy; Peru, Brazil, and Ecuador that have experimented with creative online export promotion programs; and India and Brazil that have furthered cashlessness and interoperability of payments systems in their economies. Rwanda has been extraordinarily tenacious and systematic in driving ICT sector development.

The second set of countries are those that already have a significant amount of platform-enabled trade and many online sellers. These include advanced economies, China, and many countries in Latin America and Southeast Asia. In these economies, the priority is to roll out 5G networks; refine of digital regulations conducive to platform sales, such as to establish safe harbour laws as done in Brazil; ensure free cross-border data flows as done in Singapore, and establish online dispute resolution forums, as done in Mexico and China.

These economies can also significantly bolster the quality of their logistics and border clearance processes. For example, they can copy elements of Singapore's sophisticated postal system and data-driven border clearance, and develop use cases for AI and blockchain in border clearance and logistics, as has been done in Korea and UK. The next step for these economies is to further the

digitization and interoperability of their trade and finance ecosystems, for example to fuel SME lending through FinTechs. These countries can also learn from Malaysia and Mexico's work to promote SME ecommerce exports, and from the United States that has raised its *de minimis* level to $800 to reduce customs' workload related to incoming low-value items.

All economies can do much better to support women-led companies to engage in trade on online platforms, such through incentives for women-led firms to adopt broadband and digital capabilities, and robust financing programs to help women-led firms access loans and equity finance. An important measure is for government agencies to disaggregate trade and performance data by gender.

Table 3 highlights various of these measures; nearly all are being implemented by at least one country covered in this study.

TABLE 3 - POLICY ROADMAP TO FUEL SMES' USE OF PLATFORMS FOR TRADE

Further digitization	• Prioritize diffusion of fixed broadband across the society and SMEs • Pilot and roll out 5G networks enabling high-speed and high-capacity connections and competitive, next generation retail and services • Undo tariffs on ICT products • Build women-led firms' digital capabilities, for example through incentives to deploy fixed broadband
Develop regulatory frameworks for platform-enabled trade	• Establish safe harbor regimes that provide internet intermediaries immunity from liability for user-generated content • Establish data transfer regimes conducive to SMEs' cross-border business • Create balanced consumer protection laws and practices that build consumer confidence but do not place onerous compliance costs on SMEs • Promote online dispute resolution (ODR) systems; at the minimum, ensure consumer complaints can be submitted done online and are handled promptly • Limit and weigh the trade-offs of restrictive OTT regulations on competitive internet services
Fuel online payments	• Further cashlessness and diffusion of online payments, such as through financial incentives for people to use online payments and reduce transaction fees • Encourage (but do not necessarily mandate) interoperability of payment systems, domestically and cross-border, including in consultation with private sector leaders and central banks • Provide clear licensing rules for payments platforms and providers • Put in place risk-based approach (RBA) to Anti-Money Laundering/Combating the Financing of Terrorism checks

	• Implement TFA and paperless trade commitments
	• Adopt blockchain in customs, to secure and facilitate trade, and develop use cases for blockchain in trade facilitation
Fuel ecommerce logistics and trade facilitation	• Accelerate the adoption of digital single windows; consider next-generation single window systems that are platforms for B2G, G2B, and B2B services for SME traders
	• Encourage posts to embrace ecommerce as a core business and adopt ecommerce fulfilment strategies
	• Set up centers of innovation in inland and rural logistics, such as to test middle-mile and last-mile drone delivery
	• Stimulate competition and non-discrimination in courier, warehousing, shipping and logistics business
	• Develop scalable online services and information tools for SMEs to learn about using platforms to export
	• Work with platforms to create channel management programs that enable SMEs to quickly onboard on platforms that are best suited for their products and services
	• Establish creative web-streaming programs on ecommerce platforms to showcase local products to foreign B2C and B2B buyers
	• Incentivize existing exporters to become platform sellers, such as through funding or co-funding their digital transformation
Promote SME ecommerce exports	• Provide financial support for companies and collectives to export using ecommerce and pursue specific ecommerce export projects
	• Engage ecommerce platforms in PPPs and to provide training for SMEs to learn to use and readily onboard ecommerce platforms
	• Engage with ecommerce ecosystem players to better understand and respond to platform sellers' needs
	• Consider AI-powered online training portals customized to each company's unique circumstances, market opportunities, and needs
	• Promote peer learning among SMEs that are seeking to sell on platforms or have successfully done so
	• Promote women-led firms online exports, such as through training and financing

Expand SMEs' access to finance

- Promote alternative finance solutions, such as through the establishment of equity crowdfunding laws
- Adopt a regulatory sandbox, for regulators to assess market acceptance and regulatory needs around new online lending and finance solutions
- Encourage open banking and portability of businesses' data across digital ecosystem, such as between ecommerce platforms and banks
- Adopt a fund-of-funds to expand VC investments in ecommerce and digital businesses
- Consider ecommerce credit guarantee to incentivize larger online transactions
- Support women's financial inclusion and offer robust loans and equity financing for women-led companies

VII. NEXT STEPS

Developing country SMEs have an unprecedented opportunity to use global online platforms to sell their goods and services at home and abroad, grow their businesses and employ people, and improve their lives. This report is a pioneering effort to analyze the design of a range of regulations, policies, and practices conducive to SMEs' use of platforms to trade around the world. The approach and results can be leveraged in various ways, such as to:

- Expand the set of countries analyzed here, to enable rigorous cross-country comparisons and identification of a wider range of policy innovations;

- Create a real-time online database along the lines of the UN's database for paperless trade policies to systematically track countries' progress on implementing policies essential to platform-enabled trade;

- Use the framework employed here to develop common international policies and practices to stimulate SME use of platforms for trade, and to develop capacity-building projects for countries that are lagging behind in SME ecommerce; and

- Use policy data collected here to create a "digital integration index" to analyze the interoperability of countries' digital regulations, and identify ways to further it.

This work is hoped to generate regulatory reforms, trade facilitation efforts, SME export promotion programs, and SME financing facilities and policies in developing countries that materially improve the odds for developing country SMEs to engage in cross-border ecommerce, specifically on online platforms. The project is ultimately hoped to fuel the growth of platform-enabled trade and help SMEs engaged in platform-enabled trade across developing countries and all firm segments, particularly women-led and rural enterprises.

APPENDIX I – POLICY ISSUES MAPPED

Digital infrastructure policies

Broadband plan and development programs in place

5G development plane and licensing in place

Level of competition among fixed broadband providers - ITU data

Level of competition in wireless local loop - ITU data

Information Technology Agreement member - WTO data

2016 applied MFN tariffs on cellphones (HS code 851712) - WTO data

2016 applied MFN tariffs on laptop computers (HS code 847130) - WTO data

Quality of ICT laws - World Economic Forum data

Incentives for women-led companies to use broadband or innovate in tech

Digital regulations

Liability rules for internet intermediaries

Copyright limitations and exceptions - use of "fair use" standard

OTT regulations affecting Internet services - internet services' requirements to be licensed?

Data transfer rules

Limits in certain sectors or by certain subnational jurisdictions

Limited with jurisdictions with weaker laws or not branded as "adequate"

Requires user consent (always, or in jurisdictions not governed by adequacy standard or other arrangement)

GST/VAT on digital sales

Online dispute resolution (ODR) in place

Complaints can be filed online

Digital / video-based court procedings

Electronic signatures admissible, legal, and enforceable

Digital business registration and licensing

Payment regulations

<u>To create infrastructure for electronic payments</u>

E-payments law in place

Risk-based approach (RBA) KYC regime in place

Regulatory requirements differentiated by type of payment service and its respective risks?

Central banks mandates (or lack thereof) to use the home country's currency in payments (on- or offline payments)

Rules on how to obtain a payments license exist

Capital requirements for payments providers defined

Auditing and reporting requirements for payment providers defined

Privacy requirements for payment providers defined

<u>To incentivize use of electronic payments</u>

Demonetization programs to promote digital payments

Regulations or programs to fuel interoperability of online payments

Immutable national ID in place, such as based on blockchain or biometrics

Trade facilitation for ecommerce

De minimis threshold for entry of goods

De minimis for informal entry

Publication of existing import-export regulations on the internet (UN data)

Electronic submission of customs declarations (UN)

Expedited shipments (UN)

Separation of release from final determination of customs duties, taxes, fees and charges (UN)

E-payment of customs duties and fees (UN)

Risk management practices in place (UN)

Electronic application of preferential certificate of origin (UN)

Electronic single window in place (UN)

Single window provides services for SMEs and trade intermediaries

Engagement in trade-related cross-border electronic data exchange (UN)

GATS commitment on liberalizing courier services

Existing trade facilitation policy/strategy incorporates special consideration of women involved in trade (UN)

Government has introduced trade facilitation measures to benefit women involved in trade (UN)

Use of blockchain in customs

Innovative postal services such as drones and ecommerce fulfillment and warehouses; collaboration with ecommerce platforms

UPU postal development index

SME export promotion

Online training programs for SMEs to export through ecommerce

Online services, such as government-sponsored ecommerce platform or channel management platform

Financing for digital transformation for exporters to use ecommerce

Public-private collaboration to traing SMEs to use platforms for trade

Assistance to SMEs with logistics in cross-border ecommerce

Programs for women-led firms in exports and ecommerce

Government-led surveys or studies on SMEs' use of ecommerce and their constraints

SME credit

<u>To build SME finance infrastructure</u>

Regulatory sandboxes for FinTech

Open banking / Open APIs mandated

Banks mandated to refer non-qualifying SME loan applications to alternative finance providers

Regulatory framework for equity crowdfunding

<u>To provide funding</u>

Credit guarantees or direct loans for micro and small working capital loans

Direct loans from government to small or micro firms

Equity for tech and digital businesses (government as general partner, such as runs a venture capital fund, invests directly)

Equity for tech and digital businesses (government as limited partner or fund of funds, investing in VCs that invest in SMEs)

Specific equity programs for exporters (or VC investments expressly for exporting)

Programs to finance or guarantee ecommerce transactions

APPENDIX II – LIMITATIONS TO POLICY SCORING

The policy scoring aims to capture the most essential elements that countries should have in place when they seek to help SMEs use platforms to trade across borders and compete successfully in the 21st century digital economy. As in any effort to establish a composite policy index, there are a number of caveats and limitations to this methodology:

- **Quality of implementation.** The quality of implementation is key for any policy to work. We here primarily map policies "on paper", but not the quality of implementation. However, the outcome variables give a sense that countries that have good policies in the books are also ones that attain better SME ecommerce outcomes.

- **Weighting.** The index covers several different domains, such as regulations, trade facilitation, and SME export promotion. It could be argued that one of these main categories matters more than another, or one matters more at a given point in time than another – for example, SME ecommerce export promotion matters little in the absence of internet connectivity. However, there is also no particular reason to weight one domain more than another – rather, the assumption here is that at the end of the day, all the mapped areas matter for platform-enabled trade to work.

- **Limited sample size**. The index here covers only 40 countries; thus the universe of possible policy innovations countries may be pursuing and that could become a sub-category in the index are inherently not covered.

- **Limits of data collection.** The policy data for this pilot index is harvested from government portals and other websites, rather than from surveys sent to governments. As such, the quality of the data is as good as the information available online. In future iterations, collection of data via questionnaires fielded to government agencies and perhaps local think-tanks could be a useful approach.

- **Policy may not be needed.** In some areas we score, such as the use of biometrics in payments or open banking mandates for SME lending, the private sector is in many countries leading the way and no particular government mandate is required. This is the case, for example, with open banking practices – many banks are pursuing these practices without being forced to do so. The qualitative mapping produced in this project captures such promising private sector activity. When these areas are scored and quantified, it is assumed that the government mandate can accelerate and formalize a good practice (such as expand and accelerate open banking practices).

- **Timing of data.** The data are collected in late 2017 and early 2018, and the scoring is at this point indifferent to the timing of any one policy's starting date. For example, some Asian economies such as Korea and Japan had broadband plans already in the 1990s, while some African economies adopted them much later. It can thus be expected that these Asian countries would be much farther along in harvesting the gains from broadband penetration on ecommerce. Time-series data that showed the year when a given policy was adopted would provide a more comprehensive picture of the impacts of regulations on economic outcomes and to platform-enabled trade. However, the effort here is primarily focused on building a policy index benchmarked to 2018.

- **Countries' differing starting points.** The countries analyzed here are at very different levels of development – and thus it could be argued that least developing countries should not be compared to advanced economies that have had certain components in place for years. For example, Korea and Japan have had 3G and 4G networks for years and are now well on their way working toward 5G, while Bangladesh is still seeking to diffuse 3G and 4G networks. This could suggest that developing countries are compared "unfairly" and should be weighted differently. However, we have here opted not to weight countries, so as to enable fast and straight-forward comparisons across economies – just like is done in most leading global indices. We have also chosen to highlight here the policies and practices of the countries that are frontrunners in platform-enabled trade, so as to inspire countries to leapfrog. For example, many countries considering digital single windows could learn from Singapore's National Trade Platform that is also a platform of B2B and G2B services for SMEs in trade. Similarly, countries could learn from Singapore and UK's application of predictive analytics and blockchain in customs.

- **Interoperability of regulations with trading partners.** The analysis here focuses primarily on domestic policies, as governments have control over them. However, this choice also means that this analysis does not fully account for the factors that impact SMEs' use of platforms for trade in *foreign* markets, such as tariffs and *de minimis* levels in other countries. This study also does not measure whether a country's domestic digital regulations interoperate well with those of its key trading partners, so that the country's SMEs could apply the same consumer protection laws, data privacy laws, and copyright laws when serving foreign customers as they apply at home. This lack of interoperability in digital regulations in Europe has been found to significantly impede intra-EU ecommerce and is shown in Nextrade surveys to concern SMEs – but our analysis does not at this juncture capture this friction.

- **No theoretical or econometric model.** One critical challenge in the process of developing the policy index for platform-enabled trade is the lack of a theoretical framework on the success drivers for ecommerce or platform-enabled trade. In other words, there is no model that would tell which exact components make for an optimal enabling policy environment for SMEs to use platforms for trade. For example, while there are studies on the factors that are critical for ecommerce (such as fluid online payments, logistics, and hospitable regulations), it is not clear what the binding constrains to ecommerce in any one economy, or what the optimal sequence for addressing the various constraints is. Survey data do suggest that logistics, digital regulations, and finance are key impediments to ecommerce in most countries, but also that the relevance of these barriers and other issues, such as online payments quality or connectivity, varies widely across countries and across firm segments.[114] Similarly, ecommerce platforms have informed views on what tends to work to stimulate platform-enabled trade. The main limitation to *modeling* the drivers of ecommerce to date has been the lack of consistent data on ecommerce and platform-enabled trade. The statistical analyses performed in this study with actual data on platform-enabled trade are a pioneering step in the right direction. However, still more work needs to be done, including with time series data and data with control variables, to establish more firmly which policies are particularly critical for platform-enabled trade.

Notes

[1] By leveraging cloud-based tools, entrepreneurs can lower capital expenditures and barriers to enter new markets much below those required of the traditional brick-and-mortar companies.

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